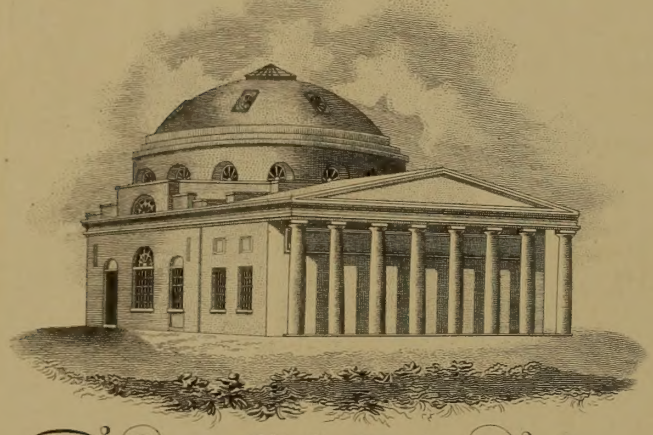
BOUND BY CHARLES L. ELLIOTT 1901 HOWARD ST. BALTIMORE
WE BIND BOOKS OF ALL DESCRIPTIONS

JUN 14 1940

LIBRARY
OF THE
School of Medicine



University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

These dissertations were digitized in 2011-2012 and are available at the UM Digital Archive (archive.hshsl.umaryland.edu) and the Internet Archive (www.archive.org).

(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1868 (d)

Author	Title
Moorman, J.A.	Cinchona
Carpenter, George H.	The Function of the Digestive Fluids
Eisenhart, William H.	Diphtheria with a Clinical Case of Rheumatism
Summers, James P.	Dysentery
Dausch, Peter	Pulmonary Tuberculosis
Kerr, Charles S.	Chloroform
Giddings, William V.	Acute Bronchitis
Price, Joshua T.	Opium
Stokes, James H.	Epilepsy
Greenway, Gilbert C.	Food
Bordley, James Jr.	Differential Diagnosis of Typhus and Typhoid Fevers
Thomson, Pembroke A.	Acute Lobar Pneumonitis
Williams, T. Clayton	Use of Alcohol in Phthisis

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1851-1892; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

UNIVERSITY OF MARYLAND

THESES

1868(d)

Moorman, J. A.	Cinchona[1]	28p.
Carpenter, George H.	The Function of the Digestive Fluids	20p.
Eisenhart, William H.	Diphtheria with a Clinic Case of Rheumatism	33p.
Summers, James P.	Dysentery[2]	37p.
Dausch, Peter	Pulmonary Tuberculosis	60p.
Kerr, Charles S.	Chloroform	23p.
Giddings, William V.	Acute Bronchitis	20p.
Price, Joshua T.	Opium	27p.
Stokes, James H.	Epilepsy	34p.
Greenway, Gilbert C.	Food	33p.
Bordley, James Jr.	Differential Diagnosis of Typhus and Typhoid Fevers	35p.
Thomson, Pembroke A.	Acute Lobar Pneumonitis	18p.
Williams, T. Clayton	Use of Alcohol in Phthisis	31p.

(1) Calligraphy on all ten section headings
(2) Partially faded

AN

Inaugural Dissertation

ON

Cinchona

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

J. A. Mowman

Of

Virginia

Session of February 1855 18

1 Mb
18951

LIBRARY

An

Inaugural Essay

On

Cinchona

Submitted to the examination

Of the

Provost, Regents & Faculty of Physic

Of the

University of Maryland

For the

Degree of Doctor of Medicine

By

J. A. Hammond

Of

Virginia

February 1818

With due deference to the several branches of my profession pregnant as they each are with subjects that equally demand my attention and study, I have given preference to the Materia Medica, from which I have selected Cinchona; not because I feel that it is in my power to offer in written or oral language, words sufficiently expressive of its great value; but because in writing upon this subject I feel and know that its virtues are positive and certain and will therefore bear a repetition with greater impunity than most others.

The reputation which it acquired at an early age as an antiperiodic was but the dawning of an inevitable knowledge. As the

prejudice to its use, which for so long a time masked, as it were, its real value was thrown aside by degrees, science was allowed access to the grand and prolific field which it offered; nor have her researches been in vain; but she has put man in possession of an Antiperiodic as well as Tonic, which now stands upon the topmost [illegible] of popularity, without a competitor, and defying competition, bound to flourish so long as the good ship truth spreads her sails, or nature produces fiery hair, or time spreads its white spray on human heads.

Unlike most [illegible] the [illegible] of which have in the opinion of the Physician undergone the successive stages of [illegible]

maturation and decline Cinchona with her Alkaloids rises superior, and with the whole world to endorse her, exclaims in an unmistakable tone, efficacy is mine.

For many years it was not known that but one species existed; but discovery after discovery continued to be made until at length the list became so unwieldy that Botanists were compelled to classify them, each constituting a distinct genus, an all associated in the family Cinchonaceae.

Cinchona is so called because, the Countess Cinchon was the first to introduce it into Europe. This was in 1638. Peruvian Lack because brought from Peru; Jesuits Lack be-it was first in possession of the Jesuits;

and it was they who first called the attention of the profession to its use. It was sold by them for its weight in silver; Kina Kina because, it is king of barks or bark of barks.

The Cinchona tree grows for 600 miles along the Andes mountains at an elevation of 4000 feet above the level of the sea. The width of country in which it abounds is from 40 to 50 miles. It is noticed that the best growth is found in the red clay soil. The trees grow from 10 to 15 inches in diameter, and it is only those that have woolly flopoms that are capable of curing Paroxysm. It is important that it should be procured in dry weather, because mois-

ture not only destroys the color but the active principles are likewise lost. The bark is gathered by Indians who cut the trees down and with a knife made for the purpose the bark is peeled off, and dried in the sun; that from the trunk prevented from coiling by weights but that from the twigs is coiled or quilled by the heat of the sun. The size of the quill depends upon the size of twig, the age of the tree and the kind of tree. After it is dried it is then taken to store houses in the neighborhood which are built for the purpose.

Peruvian bark was formerly shipped to England and then to America. It is shipped in hides lined with cloth. The pin

ciple ports in Chili, are Arica, Callao and Payta

The fractures of the bark are of three kinds, viz. fibrous, smooth and resinous. If the fracture is smooth it contains but little Quinid; but if the fibres are spindle shaped it is worth purchasing. The taste is extremely bitter, and some of the specimens are astringent. The active principles may be extracted by boiling water but this is an inferior solvent. Alcohol or dilute acids are better. The active principles are all alkaloids and the most important of them are Quinia and Cinchonia. These exist in the bark in combination with Kinic acid.

There are three kinds of bark [illegible] officinal

in our Pharmacopoeia, viz. Cinchona Pallida, Cinchona Flava, and Cinchona Rubra.

Pale Bark.

The Pale Bark is derived from Cinchona Condaminea. This variety always comes in quills and the fracture is smooth instead of fibrous, and taste somewhat astringent, showing that that it contains Tannic acid. This bark is apt to coil in double quills, is covered with lichens or moss which gives it a grayish dun color, but different specimens are different colors, the darker being the most active. The discriminating between the two is very difficult but is the only reliable means of dis

-tinguishing the different varieties. The form of lichens also varies with the different varieties. The Pale barks are said to be chemically characterized by containing a larger amount of Cinchonia and Quinidia than of Quinia. Another rule for distinguishing is that the infusion does not give a precipitate with a solution of sulphate of of soda. The best forms of Pale Bark are called Loxa Bark.

The important points to be remembered about the Pale bark are that it always comes in quills, contains more Cinchonia, and is astringent. There is far less Quinia in this variety than in the [illegible] red barks.

Cinchona Flava

This is the bark of Cinchona Calisayia. It comes in quills or flat pieces; and the quills are larger than those of the Pale bark. They break with a fibrous fracture and the pricking with them is very irritating. The flat pieces have the epidermis detached whilst that of the quills remains on, and is very rough. It is also characterized by being much more bitter and having less tannic acid than the pale. It is always known as Calisayia bark and is found in the south. It is this kind that is richest in Quinia and is therefore the one from which it is mostly obtained

Red Bark

This variety is known in commerce as Cinchona Succirubra. It usually comes in flat pieces but sometimes in quills which are generally doubled. The pieces are not so flat as the Yellow Bark. Those parts which have not been exposed to the air are of a dark orange color.

The taste of the Red is bitter and astringent, and chemically characterized by containing 2 percent of Quina, and not so much Cinchonia. The chemical constituents are found in the form of tannate of Quinia. The tannic acid that is found is called Cincho-Tannic acid. The red

Cenchonic acid found in red bark is thought to be Tannic acid that has undergone oxidation.

Sulphate of Qwinia or Quinine

This the sovereign remedy is prepared from the Yellow bark. The bark is first boiled in water and Muriatic acid; to this Lime is added which forms the muriate of lime, which remains in solution and the Quinia is precipitated. The precipitate is well washed with boiling alcohol filtered dried and digested in alcohol. The alcohol is now evaporated off. The residue is then dissolved in hot water, acidulated with sulphuric acid and crystals of disol-

phate of Quinia are deposited, when the solution cools. The crystals are white and feathery, little soluble in water, and very soluble in Alcohol. Sulphate of Quinia was discovered just [illegible] years ago. It has an intensely bitter taste, soluble in 740 parts of cold, and rather more soluble in hot water (about 30 parts). It is also soluble in 60 parts of ether

Tests.

The most characteristic tests are the following. 1st Add ammonia to a small amount of Sulphate of Quinia dissolved in Chlorine water; and the result is an Emerald green. 2nd With Iodine and Iodide of Potass. we have a cherry red. 3rd The fluorescent test

gives a pale blue color when examined by polarized light. 4th. If contaminated with starch touch it with Iodine and it will give a blue color. 5th. If contaminated with minerals they will not dissolve in Alcohol. 6th. If contaminated with Sulphate of cinchonia it will not dissolve in Ether.

Cinchonia.

This is a white crystallizable substance but not so bitter as Quinia, [illegible] white water, (requiring 2500 parts to dissolve 1.) crystals are not efflorescent like those of Quinia, but hard and shine. The medicinal properties are the same as Quinia and must be given in larger doses.

Quinoidine.

This preparation is very much used now. It is a non-crystallizable amorphous Quinia. It is only about half as strong as the Sulphate of Quinia and is consequently much cheaper.

There are several other preparations of Cinchona Bark, but not much used and therefore not necessary to mention them

Physiological effects of Bark.

Quinine is found all through the tissues of the body absorbed and circulated by the Blood. for it has been found in both the Blood and

Urine, when taken in large quantities. It is also thought to be highly probable that the disease for which it is used has its seat in the Blood; and that the Alkaloids act through the Blood on a strictly restorative principle. It is also thought by some to exercise its curative effects, by acting upon the Nervous system in such a manner as to produce a malady greater than that for which it is administered, thus superseding it.

Dr. Chew thinks that it acts, by restoring to the Blood some principle which it was deficient in. It is taken up by the Blood ⅓ remaining in the system the other ⅔ being eliminated by the Kidneys. That eliminated by the Kidneys is [illegible]

in the form of Hippuric acid; the Benz acid converts the Uric acid into Hippuric.

The question as to whether Quinine exists naturally in the system or not Dr. Bence Jones has proven in the affirmative. That there is a substance identicle with Quinine or holding the closest chemical relations thereto, is now the gen. opinion of Physiologists, and that it exists in all parts of the body. He made his experiments on a Guinea pig to which had been given and compared them with others made upon one to which no Quinine had been given, and exactly similar results were had. He [illegible] the Chemical test with [illegible] and the same conclusions were arrived at [illegible] that [illegible]

sues contained Quinine without previous pre-
vious administration. This substance was
termed Animal Quinoidine. The chem con-
stituents are C.H.N.O.

The prophylactic values of Quinine are
just as undoubted as the curative if given
in time. If it be given in small doses it is
endowed with tonic properties. The extreme
bitterness coming in contact with the coats
of the stomach acts as an irritant and
thus stimulates the stomach to greater se-
cretions of gastric juice which facilitates [illegible]
It is this action that [illegible]
ble in atonic Dyspepsia.

When given in large doses the effect on the
pulse is different: It is sedative and the

larger the dose the greater the impression. It lessens the pulse by lessening the violence of the poison. Not less than 12 grs will suffice in this case and [illegible] much more is necessary. These large doses often produce gastric irritation.

One of the first symptoms of the effects of Quinine on the system is ringing in the ears, which increases with any dose and sometimes permanent deafness is the result. Delirium, loss of sight and absolute coma may result followed by death in two or three days, either at the Heart, or Head. Restlessness and convulsions are also symptoms of poisoning by Quinine, and Taline Diuretics are

The medicines resorted to for eliminating it. The most important symptoms for a Physician to know are ringing in the ears, headache and deafness. Headache is almost the natural physiological result of the administration of Quinine. It sometimes causes a burning in the Urethra, but this is rarely met with. When applied to a denuded surface a burning stinging pain is experienced. It sometimes [illegible] a burning stinging or tingling sensation on the surface when administered internally only. This is probably caused by the elimination of it by the sudoriferous glands of the skin

Uses.

It is in those diseases characterized by periodicity that Quinine is most potent as a remedy. It is questioned by some whether it is proper to administer Quinine until the system has been prepared for it by the use of Cathartics and Emetics; but experience has shown that these are not necessary preliminaries. If constipation be very obstinate it will probably not have the desired effect and in this case it would be well to [illegible] the Quinine by a Cathartic.

There are some conditions which sometimes cause us to reflect as to the propriety

of its use. One of these is inflammation of of the brain and its membranes. In this case it is best to try and subdue the inflammation before administering the Quinine, because it will be likely to aggravate those symptoms. But if the attack be a very pernicious one give the Quinine and if the symptoms are aggravated you may be able to overcome them. Inflammation of the mucous membrane of the Stomach is another objection. In this case it is best to administer by the Hypodermic method.

As to the time for administering Quinine all agree that its efficacy is most marked if given directly

after the first paroxysm; but there is a discrepancy as to the size of the dose and the repetition of it. Dr Chow recommends it in larger and less frequent doses; say 10 grs at the outset followed by 5°. While many others prefer it in smaller doses and oftener repeated.

It should be given at least 5 hours before the expected paroxysm and it is far better if 36 hours can be had.

The combination of Quinine with opium makes it infinitely better. Sweet spts. of Nitre may also be added with good effect. From 10 to 20 grs are generally sufficient to check severe fever and

from 5 to 8 grns in the milder cases. If given just before a paroxysm it is likely to aggravate it; but in malignant forms it must be given at once, whatever be the period, irrespective of any complication and in rather larger doses than common; but it is rarely nonsense to give it in larger doses than 20 grns at a time.

Besides the periodic diseases there are many others in which it has been used with great benefit; some of which are Neuralgia, Epilepsy, Scarlatina and Dysentery (when caused by malarious poison), Spasmodic Stricture of the Urethra, Typhoid Fevers, Dyspepsia as well as many others.

Forms for using Quinine.

First the pondered form, of the bark itself but this was more used formerly than at present: There are some cases in which it acts more efficiently than Quinine. Second is solid extract; third, fluid extract; fourth Tinctures, both simple, and compound; fifth, Sulphate of Quinine; sixth, decoctions of red, and yellow bark; and seventh, Citrate of Iron and Quinia. When the bark is given, the Red or yellow should be preferred to the Pale because the Cinc properties are greater. Dose of the pow Bark is from ʒj to ʒiv, and as simple tonic from 15 to 30 grs. Ter die.

Coffee or wine is a good vehicle. As a general tonic bark will exercise a happier effect than Quinia itself. It is often prescribed with the Precipitated Carbonate of Iron in cases of Anaemia. Dose of the Solid extract is 20 grs. Fluid extract Mx 20. Decoction. Boil ℥j in Oj of water for 15 minutes; strain and the dose is from ℥j ℥ij. This form is used in Diphtheria Infusion prepared by percolation. Tinct. Simple not used now. Compound Tinct. commonly known as Huxhams Tinct. is prepared from Red bark. Orange peel and Serpentaria. Dose from ℥j to ℥ij to die. This is the best form to use in Dyspepsia. By pill is also a common form

for using especially where there is Idiosyncracies. 15 gtt. aromatic sulphuric acid and 20 gr. of Quinine made into from 5 to 20 pills, make the best pills.

Channels by which administered

There are three different by which it may be administered. viz: Mouth, Rectum and Hypodermically, and an other method which has now gone in to disuse which is to draw a blister and sprinkle on the Quinine. By mouth is best and most common; by Rectum sometimes resorted to not if there are other channels available. The Hypodermic method is not so eligible, as the Physician has to be present

whenever it is administered. The dose is 1/3 as large as by mouth; and when given by Rectum two or three times as large.
The Hypodermic method is indicated when it cannot be given by the stomach, or when its effects have worn out by the stomach, and when immediate action is desired &c. &c.
And now after I have done, I take leave to beg of the Faculty, some of which are acquainted with my long and painful affliction; that if I have fallen short of the standard prescribed, that they throw around my imperfections the broad mantle of charity. And whilst painfully conscious of the great loss I sustain in being deprived of

so much valuable instruction, I can but hope
that my attainments may prove sufficient to
so merit at Her hands, my greatest desire.

AN

Inaugural Dissertation

ON

The function of the digestive fluids

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

George H. Carpenter

of

Virginia

Session of 1867 & 8

The function of the digestive fluids

It is in the last month of the session that I undertake to comply with the so much dreaded thesis law of medical colleges. I suppose every student looks upon the subject of his choice as par amount to any other, in its importance to the profession. I think I can justly regard mine as a part of the most interesting, & important physiological question of the day. Not only is it beautifully interesting to the physiologist, but the necessity of a thorough knowledge of digestion by the thera-

dentist is apparent to everyone who is capable of duly appreciating the institutional condition of a part unless he first know something of its physiology, and I am certain of no subject in physiology having a more direct importance in the management of disease than Catalytic digestion. The sustaining treatment now generally adopted in all diseases which tend to kill by asthenia has for its object the nutrition of the body, and to the accomplishment of this end my subject plays a conspicuous part. Knowing that man is a

constant waste going on within the body of all its tissues it is the duty of the physician to know what articles of food are necessary for their replacement, and their mode by which they are prepared for assimilation.

With a view to brevity I shall merely mention the classification of food & map at once to the limits of my subject.

Food is naturally divided into 1st, inorganic embracing water the salts &c, 2d, organic non nitrogenous embracing starch sugar [illegible] the fats and thirdly organic nitrog-

inous. That is the Albuminoid Substances. We have then, given us by nature, articles of food corresponding with the "Proximate principles" of the body. How are they digested? The answer is, principally, by the digestive fluids. Which are five in number, to wit, Saliva, gastric juice, pancreatic juice, the intestinal fluids, & the bile.

The Saliva is secreted by the parotid, sub-maxillary, and sub-lingual glands, and the mucous follicles of the mouth. That from the parotid gland according to Prof. Flint's lectures, is secreted only during the act of mas-

lication; and being quite fluid
enters into and becomes intimately mixed
with the alimentary bolus. Thus moistened
injured at the same time it is undergoing subdivision by mechanical
action. The Sub maxillary being
quite viscid, does not so intimately
incorporate with the bolus; but forms
with the other two fluids a kind
of covering for it which, from its
viscidity greatly facilitates its passage to the stomach and prevents
irritation and abrasion of the
living membrane of the fauces and
oesophagus. Besides this and its
function in common with the other

it seems to be closely associated with the sense of gustation which is evidenced by its by its rapid secretion when a desirable article of food is brought in sight of the subject.

The subsingual fluid and that from the mucous follicles owing to their great viscidity contributes chiefly to the formation of the smooth coating of the alimentary bolus thus greatly assisting deglutition. We will now take the mixed saliva and mention its function in catalytic digestion, namely, the conversion of hydrated starch first into dex-

trin and then into grape sugar or glucose. The starchy substances being the only one catalytically effected by the saliva. Doct. A. Flint Jr. demonstrated this action to his class by taking into his mouth hydrated starch, keeping it there for a few seconds and then applying Trommers test which distinctly showed the production of sugar. The success of this Experiment convinced me that this action of the saliva is more quickly manifested, and exists to a greater extent, than is generally taught by physiologists. Another function is by its alka-

linity to excite the secretion of the acid gastric juice which I now consider.

The gastric juice is secreted by the gastric follicles of the stomach and can be conveniently collected for experimental purposes by means of artificial gastric fistulae in dogs a process suggested by the accident which immortalizes Alaxis St. Martin and Doct. Beaumont.

The gastric juice as observed by Beaumont and others is a clear watery fluid - not viscid and of distinctly acid reaction. [illegible] contrast to the physical

properties of the saliva. It is present in the stomach only during the actual digestion of food and the secretion [illegible] first of the unrotted saliva is excited by the introduction into the stomach of digestible substances.

How upon what articles of food does the saliva exercise its digestive powers? The answer is upon the amylaceous or farinaceous articles, experiments [illegible] conclusively [illegible] only upon these; and that the other substances are but slightly acted on by it. Its collateral action in softening the food, [illegible] the tongue in the mastication of the aliment,

and [illegible] starch (raw starch) which it hydrates. It has nothing to do with the catalytic change of starch into glucose or grape sugar, but does not interfere with this function of the saliva while the starch is passing through the stomach.

Now let us see how it effects the Albuminoid substances. Experiments out side of the body show that if coagulated white of Egg be suspended in it it is gradually dissolved leaving an almost inappreciable deposit at the bottom of the tube which is insoluble in it; that pieces of fresh meat [illegible] in the same way, are gradually [illegible]

grated until there remains but a small brownish deposit at the bottom of the tube. If the hard adipose tissue of beef or mutton be subjected to the same process the walls of the fat vesicles with the intervening areolar tissues capillaries, &c, are dissolved and the oily matters set free.
In cheese the casein is dissolved and the oil it contains set free. In bread the gluten is digested and the starch remains unchanged. The casein of milk is first coagulated by the acid of the gastric juice and afterwards slowly liquefied like other albuminoid substances.

These substances, to wit, casein, musculine gluten fibrine &c, being the organic nitrogenized or albuminoid substances of the food, are all converted into a new substance called albuminose or peptone, having the general characteristics of organic matters. Hence to recapitulate, we have for the function of the gastric juice the conversion of all albuminoid substances into albuminose or peptone to set free the oils and to hydrate raw starch.

It is easily understood that the liquefying process of the gastric fluid upon food is not a simple [illegible]

tion— It is a catalytic action produced by the contact of the albuminoid substances and the organic constituents of the gastric fluid or pepsine. This process requires for its perfection the warmth of the body & the important prerequisite action of the stomach. There are essential conditions of digestion in every part of the alimentary canal— but with a view to brevity I confine myself to catalytic or fluid digestion.

I now pass from this important topic to the consideration of another which from its importance

I class as the third digestive fluid or the pancreatic juice

Examining now the alimentary bolus as it escapes from the pyloric end of the stomach into the duodenum we find that the only substances which remain undigested, are sugar and the fats. Physiologists have found the study of the three remaining fluids somewhat uncertain and certainly very much complicated owing to the fact that they make their appearance at nearly the same point in the canal, and soon becoming mixed constituting the mixed intestinal fluid.

The pancreatic juice, and the bile, however, have been obtained in a pure state from the dog, — and their function experimentally studied — The pancreatic juice is furnished by the pancreas and is secreted only during digestion. "It is a clear colorless somewhat viscid fluid with a distinct alkaline reaction". Its organic matter is known as pancreatine, and like the organic constituents of the other fluids is the most important.

The function of this fluid as determined by observations and

experiments outside of the body is to emulsify the fats, to convert the starch into sugar and to aid in general digestion and absorption.

When brought in contact with oily matters at the temperature of the body it disintegrates and reduces them to a state of complete & permanent emulsion, that is, "it is reduced to a state of minute subdivision and held in suspension by contact with the organic matter of the pancreatic juice".

This condition is instantaneously & permanently produced and the oily substances are now ready for absorption. This I conceive to be the most

important function of the fluid & its value may be estimated by it being the main & probably the only provision for this important end. The failure of the pancreas to furnish its secretion allows the fatty matters to pass off unassimilated with the Excreta constituting the disease known as Diabetes Mellitus, thus furnishing a proof of pathological interest. The pancreatic juice has the property of converting starch into sugar. This action is quickly manifested outside of the body. It has this function in common with the true intestinal fluid which is secreted by

the glands of Brunner and Lieberkühn the latter being the most numerous. The true intestinal juice has been with difficulty collected and its function according to Dalton is the conversion of starch into sugar. Prof Flint in his lectures claims for it an important function on what he terms "general digestion" or the preparation of all the constituents of the alimentary bolus for absorption.

The bile is, I believe, given up all physiologists as one of the digestive fluids, though the part it plays

in the process is undecided, therefore,
I think inasmuch as the highest physiological authority of the day have failed to assign it fixed function in the process of digestion, I will be excusable for not entering into the discussion of its merits as one of the digestive fluids.
I am reluctant to pass it by thus unnoticed after hearing the very interesting & able lectures of prof Donaldson on the bile in all its various phases, but time will not permit me to enter so wide a field and I therefore close with the hope of an opportunity to renew the subject in the <u>green room</u>

Gentlemen of the Faculty

Having the impropriety of an apology here I cannot submit the above without stating that I am fully cognizant of the weakness of my Effort. and that I have by no means done justice to my subject, or to myself. Entering college as late in the Session as I did I have not had the time to devote to the preparation of my thesis that I would desire.

I have given you hastily & briefly my knowledge of the subject & submit it with the hope that I may be pardoned for the many omissions & Errors

Febr. 12th 1858 Very respectfully &c

George H. Carpenter

AN

Inaugural Dissertation

ON

Diphtheria, with a Clinic Case of Rheumatism.

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

William H. Eisenhart

Of

York Pennsylvania

Session of 1867-68

Diphtheria.

Diphtheria is a peculiar and very fatal
a specific inflammation of the fauces, which
sometimes extends into the larynx, and
trachea, characterized by the formation of
a plastic membranous exudation, upon
any portion of the cutaneous or mucous
surface which is exposed to contact with
the atmosphere.

History.

It appears to have been known for a
twelve or fifteen hundred years, but is
only comparatively of late years that it

become of so frequent occurrence, as to have engaged the minds of medical writers in the important pathology and treatment, which are still very imperfectly understood; though its fatal tendency is so well known as to give it a place among the diseases of importance as regards its nature and treatment.

Nature

The pathology of this disease is as yet involved in doubt. Some writers think that it is only a variety of croup, rendered more malignant by the constitution and general health of the patient at the time of the attack.

That it very closely resembles croup is very true. The main distinctive features of the disease is that it is a blood disease, generally attended with great depression, while croup is a local acute inflammation, and is generally confined in its attack to children. The exudation in croup always commences in the larynx, and trachea, while in diphtheria it commences in the fauces and from thence passes into the larynx.

Others, suppose that it is nothing more than scarlet fevers characterized by a predominance of throat symptoms [illegible] again as

is proved by the fact that it does not proceed from it. The Sequelae are also different showing that the two diseases are distinct and separate.

In Diphtheria we never have any Dropsical symptoms, but we do have a peculiar loss of nervous power and local paralysis which never occurs in Scarlatina. Some think it is dependent on a parasitic fungus growth, this is denied by a great many as a cause of the disease. Though it does exist in all cases this will be found to exist. The best that we can say of the cause of the pathology of this malady is that it is essentially a blood

Disease [illegible] [illegible] Zygomatic

Character

Symptoms

The symptoms of this disease are various, in the commencing and advancing stages, as also in different cases. In the commencement of the attack, they are usually those that attend common angina, such as soreness of the throat, difficulty in swallowing, fever, and head ache, which is sometimes very severe. The [illegible] is usually of an asthenic type, though in the worst cases there may be little or no fever but this condition is generally followed by symptoms [illegible]

indications of a more serious disease than angina

and, upon making an examination of the fauces

and tonsils will be found a bright red or livid

color, and upon one or the other tonsil sometimes

in the fauces, small irregular circumscribed patches,

of white yellowish or dark colored membrane

formed by the exudation of [illegible] the blood,

which coagulates forming a membrane of variable

consistence, usually of a dense and tough texture.

The exudation sometimes spreads over

the tonsils and fauces. The submaxillary and cervical

glands are usually somewhat swollen & tender.

The pulse is small quick and feeble

After a time the membrane begins to suppurate and be removed, frequently giving out a fetid odor, and if the disease is not resisted by the remedial means employed, the membrane extends into the larynx constituting diphtheritic croup, the symptoms now increase in severity and deglutition becomes very difficult, fluids taken by the mouth return through the nostrils, respiration becomes oppressed, the voice and cough becomes hoarse or entirely suppressed. There is great depression of the vital powers and the patient is semi-comatose. About the time the diseased action passes into the nares and is attended with copious

discharge of very offensive smell. (Which is characteristic of this extension.) If the false membrane is not removed by mechanical means, the mucous membrane is found to present no solution of continuity, but there will be minute bleeding points allover the surface from which it has been removed, and in a short time it will form again. The formation of diphtheritic false membrane is not confined to the mucous membrane but may take place on any part of the external surface of the body provided the epidermis be removed. The appearance of the false membrane if carefully examined

by the unaided sight is of the character of fibro-plastic membrane, when examined by the microscope it is found to consist of the ordinary constituents of such structures, but varies somewhat. It is composed chiefly of "Molecular particles, epithelial cells, of all kinds and shapes! Pus and blood cells and sometimes if not in all cases, which I think would be if a careful examination were made parasitic fungus growth will be found

Causes.

The causes of this disease are not at present certainly known various

conjectures are presented, the most probable of which are a peculiar predisposition of the system, certain conditions having a tendency to debilitate the general health such as extreme cold, or excessive heat, sedentary habits, with a vicious diet, the depressing passions, violation of the laws of health, and in fact all influences tending to depress the vital powers may be sometimes the exciting causes of this disease.

The parasites found in the false membrane in this disease, are thought by some to be the cause of this terrible malady and with inherently a great degree of contagiosity when we

take into consideration the well known instant-
action of parasites on mucous surfaces, especially
when they are predisposed to inflammation as they
undoubtedly are in this affection.

It is not improbable
that they may act through the blood also; but
the constant existence in this disease is denied
and how great a share they have in the cause is
very uncertain. The disease is sometimes
epidemic supposed by some to depend on locality
conditions of the atmosphere. The fact
that it may be propagated by contagion,
and that it is infectious sometimes, fact

is admitted by all. Though perhaps very rarely, Inoculation with the secretions of Diphtheria are said to have produced the disease, and it would behoove us to be careful, not [illegible] Nurses who are employed in Diphtheria in patients unaffected with the disease as it may be propagated in that way.

In the end I sum up all things said to produce Diphtheria, it would appear that there is no known poison capable of producing it but that it is generally brought on by any thing capable of lowering and destroying the vital powers of the System.

Diagnosis.

The diseases with which Diphtheria is liable to be confounded, are croup, ulcerated and Malignant sore throat; From the first it may generally be distinguished by the membrane in Diphtheria forming on the tonsils and fauces first, while in Croup it usually commences in the larynx. The swelling externally and the asthenic type of fever also serve to distinguish it from Croup. Croup usually attacks children under ten years of age. Diphtheria is not confined to any particular age. And the increasing

in swallowing is absent.

In croup the first systems are an alteration in voice and stridulous breathing. From the second or ulcerated sore throat it may be distinguished by not presenting the excavated surface of that disease. Though in some cases it will require exceeding care, it can be distinguished from the third or malignant sore throat, by its not having the gangrenous sloughs, of that variety. The appearance of these last two varieties of sore throat are sometimes presented in diphtheria after the false membrane is thrown off, and a [illegible] [illegible] is very

difficult if not impossible.

Prognosis

The prognosis of diphtheria is generally unfavorable; this is especially the case should the exudation take place in the larynx, the depression of the powers of life in this disease are generally very great and when this extension takes place the patient is apt to sink from the prostration of the nervous system, and insufficient aeration of the blood. In the worst cases they are apt to be followed by very serious symptoms such as paralysis in its different forms more frequently local than general.

The muscles of the fauces and larynx are more frequently attacked or paralyzed than any other parts; sometimes there is amaurosis and ophthalmia. The paralysis is supposed to be the effects of the poison on the nervous system and this opinion is confirmed by the results of the treatment. It usually yields to tonics; nervous electricity, and astringents are also very useful.

Treatment.

As before stated diphtheria is a blood disease and must therefore be treated constitutionally. The treatment of this disease has been very

unsatisfactory, and it is comparatively of late that it has become anything like settled, there are still those who recommend one plan of treatment, and others a course directly antagonistic, thus some may say it is best treated antiphlogistically, on the other hand there are those who say the stimulant plan is best suited to the disease. Now either plan pursued to the exclusion of the other is very injurious and dangerous as what is beneficial in one case may be dangerous in the other, therefore it would be best to treat the disease according to the indications.

regardless of the one or the other method.

If the fever partakes in the first stages of a sthenic type, it may be necessary to apply a few leeches to the angle of the jaw, but the bone is considered useless. At all events stimulants should not be employed, the diet should be mild unstimulating and nutritious, when the fever is more of an asthenic type stimulants may, and should be given, to sustain the vital powers the prostrating influence of poison, as the disease progresses. In the commencement of the treatment some recommend the use of an emetic. This is

seldom necessary. Here are some mild purgatives. This will be very good in the beginning of the treatment but should not be persevered in throughout, when there is considerable heat then cold and wet applications are sometimes very useful; But it may sometimes become necessary to use warm fomentations especially in the latter stages.

Tonics and Stimulants will be required in the severe and malignant cases and should be commenced as soon as the patient shows symptoms of sinking, the Tonics recommended as among the best are Quinine, Carbolic Acid &c.

Hydrochloric Acid, with stimulants such as beef tea, Brandy, Wine, Milk and a good nutritious and easily digestible diet. When the patient is unable to swallow, stimulating and nutritious injections should be used to sustain the sinking powers.

But with the constitutional treatment there is the local which if not the more important is certainly very necessary and should not be neglected, though some say that it is useless to treat a constitutional disease locally. I would not reccommend that barbarious and cruel not to say dangerous practice of using strong and powerful caustics

which are almost sure to do harm, and increase the danger of the extent. But some mild Astringent solutions are very useful and necessary. The removal of the false Membranes by forceps or other mechanical means cannot but be injurious. The membranes form again and probably earlier than injuries consequent on the increase of the irritation, such measures are sure to produce. In very mild cases the local treatment might possibly be all that is necessary. Unfortunately such cases are very rare. The local applications various substances have been

used with more, or less advantage.

Among the best are Tinct. Ferri. Chloridi and Chlorate of Potassa the former of which as before stated is one of the best internal remedies.

Also Solution Nitrate Silver, Tannic Acid, Capsicum, Chloride of Soda, the last mentioned being especially useful in correcting the fetid odor of the discharge from the mouth and when the disease extends into the Nares, then some of those solutions mentioned may be injected up the nostrils, various other astringent solutions are occasionally used. The solutions mentioned, should not be made bathing the

average strength should be from 10 to 15 grains
of Nitrate Silver to the fluid ounce. and the
Muriated Tinct. Iron Fleas may be applied to
the diseased parts by means of a camel
hair pencil or Fly may be used as a
gargle every three or four hours as the case
appears in demand. When the system requires
to full stimulants must be employed to
sustain the sinking powers. those most
commonly used are Brandy, Wine,
Carbonate ammonia, and a nutritious diet.
The paralysis is best treated with tonics and
nervous stimulants. such as Tinct Strychnia

and Electricity, and finally when all other means fail, a Operation of Tracheotomy should be performed, the object of the treatment for it has undoubtedly saved life in cases where the patient would have perished had not the Operation been performed, this Operation should not be delayed too long it is proper to operate as soon as it is evident that the patient cannot recover unless the obstruction in breathing is speedily removed. When there is Extreme depression it may be altogether unsafe to perform any Operation as it would only hasten the fatal result. End of Thesis.

Clinical Case of Rheumatism

Mr F. R. Aged 34 Labouring Man.

I was called to see him October 23 1867.-

When I first saw him he had chills and fever complaining of a bad taste in his mouth tongue coated, I gave him purgatives calomel and jalap. I called in on the 24. he had high fever pain in his knees and ankles even extending to all joints of the body, Pulse 84. of moderate strength heart sounds, and impulse normal, joints are more or less swollen intense pain through his whole body asking not to be touched. Skin bathed with perspiration pulse increasing

I gave him the following mixture ℞ solution

Mur Morphia ʒß Bi Tart Potassa ℥ß Spts Nit Aether ʒij

Aque ʒiij one tea Spoonful every four hours.

October 26th Swelling has somewhat diminished

pain about the same as when last I saw him

pulse 90 strong continuing the mixture.

27th Pain diminished but still very acute

limbs more swollen. I gave him lemon juice ʒß

three times a day. 29th Pain and swelling have

slowly subsided since last I saw him but there

is still considerable soreness and stiffness about

the joints continuing the lemon juice.

November 1st Swelling has every where disappeared

but acute pain has again returned in the right leg which he cannot move and he told me that he felt a severe stitching pain in his back. I mitted the lemon juice and gave him Potassa Nitrate ℥ß aque ℥ xj one table spoon full three times a day. 3rd. Pain has now disappeared and wants to be up he says he feels quite well but weak, appetite good.

November 6th

He sent for me again, he had been out about and working some and doing well, he caught cold and now has pain in his breast. Slight cough, I gave him some

Antimonial Mixture. in the evening he was seized with severe pain in his left side he told me that he was afraid to draw his breath that he suffered as though a knife were run into his side, I applied a blister over the seat of pain and gave him Camphor Tinct. Opii - and Spts Nitr Aether ~~aa~~ xv ~~m~~ every three hours pain soon diminished and in the morning he was better. Was seized with rigor in the evening of the 8th followed by fever Symptoms Skin dry and hot, slight eruption severe headache pain in the back and in all his limbs tongue dry and furred no appetite but excessive

thirst pulse 90 full, but soft frequently intermits short and dry cough dullness on the right side of the chest. I gave him an Antimonial Mixture applied leeches to his head. November 9th slept well during the night no delirium. skin still hot and dry eruption a little more plain tongue more dry and dark furred. pulse 87 soft. I gave him Quinine in eight grain doses every four hours. Nov 11th has taken the powders since I saw him last no marked effects except the pulse is reduced and he has been sweating freely for the last ten hours. Still severe headache and slight

delirium. Nov 12th slept part of the night slight tingling in his ears this morning but only transient, dull and stupid seems very weak slight cough, pulse 75 small and soft stopped the Quinine. gave him four ounces of wine with Spts. Nit. Aether four times a day, very drowsy no delirium. Nov 15th. Urine to day loaded with lithates countenance livid, skin not very hot but moist Eruption has disappeared. Nov 17th fever symptoms have returned slight delirium, drowsy and stupid taking notice of nothing around him pulse 87 full and soft. Nov 20th he complains to day of pain in his stomach

with much nausea slight vomiting in the after-
noon. I gave him an emetic which produced
copious vomiting, nausea, and pain in the
epigastrium followed by profused sweating.
Nov 23rd Has had considerable diarrhoea during
the last two days, I gave him the Opium pill
and Tannin. Slight delirium to day skin hot
and dry pulse 90. full and irregular, has a
cough which is troublesome expectoration
brought up with great difficulty. Dr. very weak
I gave him three ounces of wine daily and
an expectorant Mixture Nov 25th Very
weak sweating most constant, I gave

him three ounces of Brandy in addition to the wine. pulse 102 small no appetite cough better but very weak. 27th Skin cool and moist appetite a little better, I gave him four powders of Quinine aa gr x pulse fell to 90 small and jerking continued the Brandy, and wine, and he continued to improve slowly. I saw him on the first of December he was doing very well. and on the third of December in the morning as he was rising from bed there was several of his friends in his Room he said that he was freezing and fell back and died.

Eight hours after death he was blue

along the spine.

AN

Inaugural Dissertation

ON

Dysentery.

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

James H. Summers,

Of

Westminster

Carroll Co Md

Session of 1867-1868.

[illegible] incidentally [illegible]
complications, which may [illegible]
[illegible]
[illegible] simple dysentery is [illegible]
by griping pains in the abdo[illegible]
known as [illegible], occurring [illegible]
[illegible] accompanied with dis[illegible]
[illegible], which often gives the [illegible]
[illegible]
and unsuccessful attempts [illegible]
attempts, he only succeeds [illegible]
[illegible]
[illegible], and after a [illegible]
[illegible]
in [illegible] abdominal [illegible]
appear [illegible]

[illegible] intermingled with the [illegible],
[illegible]
in some cases. The discharges [illegible]
[illegible] in the early stage, but later in the
disease they [illegible]
dysentery; and quite distinct from the feculent.
Difficult [illegible] in [illegible]
cases, owing to a [illegible]
[illegible] with [illegible];
[illegible] tenderness on pressure across
the epigastrium, and along the right [illegible]
[illegible] indicate that the in[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

and power, the skin wa[illegible]
urine scanty [illegible]
coated, the secretion of bile is [illegible]
diminished. In cases of great [illegible]
[illegible] to the [illegible] of the [illegible]
on the [illegible] system, [illegible]
temporarily, the patient [illegible]
feeling of sinking in the [illegible]
cold damp skin, feeble pulse and some
times nausea and vomiting [illegible]
[illegible] of the disease, vomiting is [illegible]
[illegible] of [illegible]
[illegible] the disease [illegible]
[illegible] takes a favorable [illegible]
[illegible] and [illegible]
[illegible] recovery. [illegible]

[illegible]

is very great, [illegible]

appear at the [illegible]

fairly [illegible]. The [illegible]

yield to the violence of the [illegible]

is unable to react under this continued

violence of the [illegible]. The patient in [illegible]

violent cases has throughout a [illegible]

pale and cool skin, anxious and sunken [illegible]

lines and livid appearance under the Eyes,

about the lips and at the [illegible]

while at the same time [illegible]

and tenesmus; incessant [illegible]

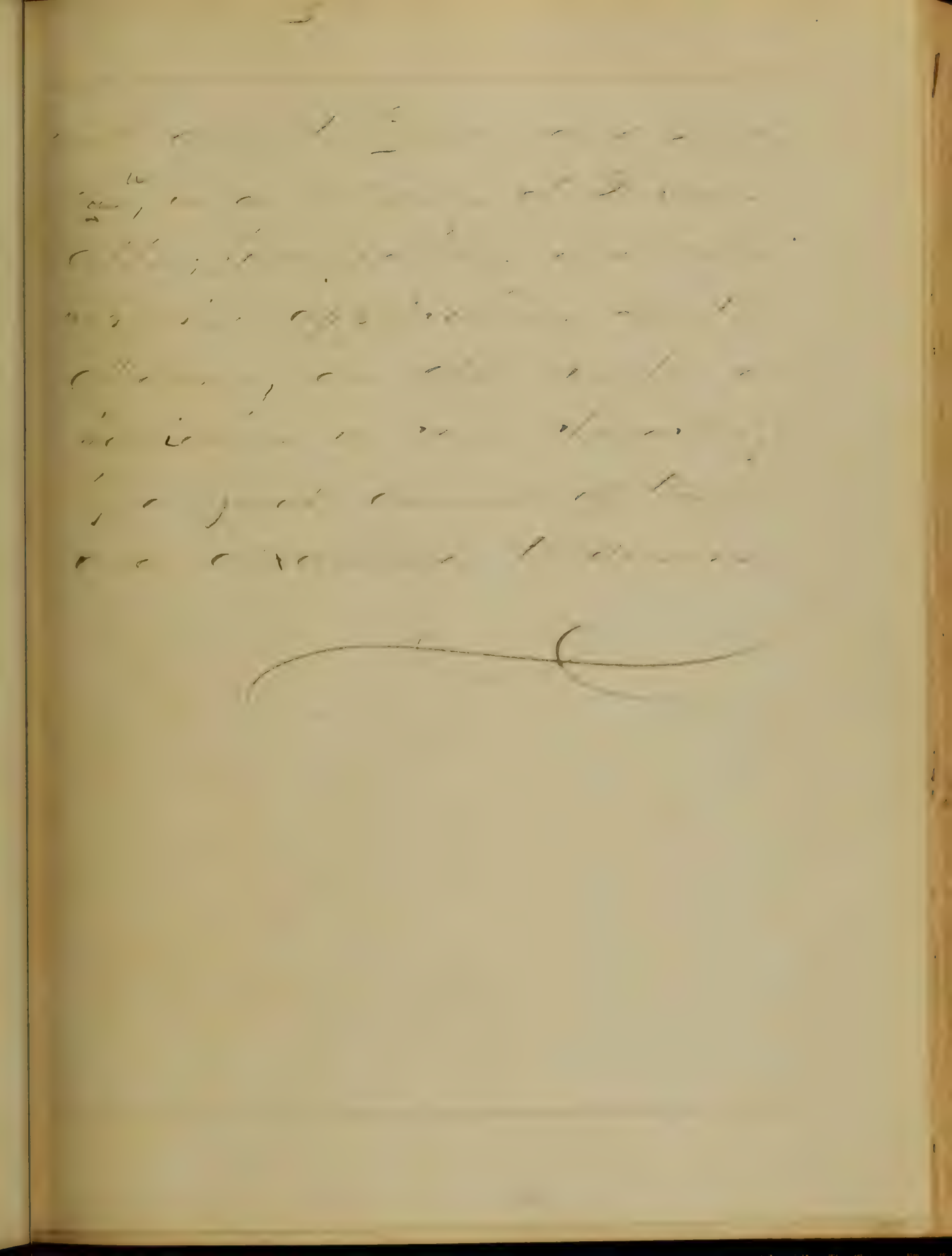
abdomen and great tenderness [illegible]

such cases prove fatal [illegible]

Should the symptoms [illegible]

Evaporated

first ~~first~~



AN

Inaugural Dissertation

ON

Pulmonary Tuberculosis

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

Peter Bausch

of

Baltimore Md.

Session of 1867 ——— 1868

The disease which I have selected as the subject of my thesis is known under various names, which are derived from different languages. It is known as Pulmonary Tuberculosis, which words are derived from the Latine, pulmo, pulmones, the lungs, and tuberculum, a little swelling, or push; a pimple, or wheal. It is also called Phthisis pulmonalis the word

phthisis being derived from the Greek word φθίσις, a passing or wasting away. This word is expressive of the great wasting away of the whole body consequent on the disease.

In English the disease is commonly known under the name of Consumption. Of these various names no one is better adapted to express this peculiar form of disease than Pulmonary Tuberculosis.

The term Pulmonary Consumption denotes an affection of the system in which the lungs are the most prominent part affected.

This affection is especially characterized by the great wasting away of the whole body, which attends its progress.

Although we have progressive emaciation in other affections of the body, yet the passive wasting away is never so great and so well marked as it is

this disease. Hence our able professor Richard Mc. Sherry says that, if we see a patient with a quick, tense pulse, an elevation of animal temperature, and a progressive emaciation, we may suspect that fearful enemy, Consumption. Of all the diseases to which mankind is subject, this is one of the most prevalent and fatal, causing, ordinarily, one sixth of all the deaths of the human race.

But before we proceed further into the history of this disease, let us first take a glance at its anatomical character.

Pulmonary Tuberculosis means the deposition in the lungs of a morbid product called tubercle. What is tubercle? In pathological anatomy tubercle is a morbid exudation which consists of an opake matter of a pale color; this, in its crude condition, has a consistence analogous to that

cele albumen; it subsequently becomes soft and friable, and gradually acquires a consistence analogous to that of pus.

Tubercles may be developed in different parts of the body, but they are most frequently found in the lungs and mesentery, and occasionally in the lymphatic glands, brain, spleen, kidneys and liver.

Most writers now agree that under the head of tubercle, they

embrace two Kinds of deposits:
one Kind is known under the
name of gray or miliary tubercle,
the other is called the yellow or
cave tubercle.

The gray or miliary tubercle derives
its name from the small size of
its deposits, which are not larger
than a millet seed. These tubercles
are small, roundish, shining,
semitransparent, hard bodies,
either isolated or in aggregate
masses, on which portions of the

pulmonary tissue is invaded and consolidated. It is the presence of these in immense quantities, which constitutes the disease called acute phthisis. These tubercles are also sometimes found in association with the yellow or true tubercle. The ordinary form of tuberculous deposits, which occasion the so called chronic phthisis, are the yellow or true tubercles; these as their name indicates, are usually of yellow color and cheesy consis-

tence, being soft and friable.
These tubercles multiply and
enlarge by growing together,
until masses are formed, while
at the same time fresh deposits
take place in the surrounding parts.
If we examine them microscopically,
we find corpuscular bodies enclosed
between them, which is a property
peculiar to this kind of tubercle.
The deposition of tuberculous matter
depends upon a special con-
stitutional cachexia. It usually

takes place first at the apex of one lung, and as the disease advances, extends more or less downwards towards the base, and finally the deposition also takes place in the apex of the other lung, and also extends downwards towards the base. The next change that takes place in the tubercle is the softening process, which usually commences in its centre, and gradually advances to

wards the circumference, until the whole of the tubercle is converted into a soft, yellowish mass, which has somewhat the appearance of pus. At this stage of the disease inflammation of the surrounding tissues is produced by the irritating properties of the matter, which finally ends in ulceration and in the production of an opening between the tubercle and the bronchial

tubes; the matter now empties into the bronchial tubes and is expectorated by the patient, leaving a cavity behind, which the older writers term vomicae. This tuberculous cavity may not be larger than a pea, or it may occupy a half or whole lobe of the lung, according to the quantity of the lung destroyed. Cavities are very seldom produced in infants, oftener in adults.

Having examined the anatomi-

cal characters of this disease, we shall now pass to its clinical history, which embraces the symptoms and course of this affection.

Symptoms. Most frequently one of the first symptoms in the early stage of phthisis is a sallow, pale aspect, attended with a short, dry, hacking cough, at slight at the commencement, as scarcely attract attention; the patient gets a dislike for fatty articles of food, suffers loss of

muscular power, and vomiting.

But I have almost forgotten to mention that the very earliest symptom I can discover is an elevation of the animal temperature; and we should never fail to apply the animal thermometer in this disease, especially in its early stages, if we are in doubt whether this affection is existing in the patient or not. I have seen several physicians misled by these general symptoms above

mentioned, who supposed that
the patients were laboring under
the first stage of phthisis, when
in reality they had nothing
but a slight attack of bronchitis,
or laryngitis. In order to prove
that my statement is correct I
will cite the following case,
which came under my care, and
attracted my attention.
In May, eighteen hundred and
sixty-six, I was called to see a
colored female patient, suffering

in a country-town of this State, supposed to be laboring under that formidable affection, consumption. Her statement to me was, that she had been laboring under a severe cough, accompanied with frothy expectorations and deep seated pains in the chest, for over fifteen years; that two physicians had been attending to her at one time, who pronounced that she had consumption. Becoming disgusted with their treatment of

discharged them, and being well acquainted with me, sent for me. When I arrived at her house, I found her very nervous; this condition of her system had been brought on by a violent attack of her severe cough, of which I have spoken, and which gave her no rest at all at night. One peculiar feature connected with the patient's cough was that as often as she drank cold water, the cough ceased for a while. I performed percussion but

could not discover the slightest dul-
ness; I put my ear to her chest, but,
with the exception of a muttering
of the respiratory murmur, I found
out no auscultory signs, indicative
of the presence of tubercle. The pa-
tient's pulse was normal; and to
make sure that she had not con-
sumption, I applied the animal
thermometer. Now, what did I
find? The animal temperature
of the body was quite normal,
not exceeding ninety-eight degrees.

Thus we can see of what importance that little instrument, the minimal thermometer, is. We should never form a diagnosis in such a disease without having first applied it. Another peculiarity about this patient was that she always complained of a tickling in the throat. I made an examination, not to my surprise I found that the tumor was very much elongated which was the exciting cause of most of the cough. The disease

able to account for this peculiarity, viz, that the cough would cease for a while, when she drank cold water; the uvula being by this means contracted and the tickling in the throat being thus checked. Now this patient had nothing but a slight chronic bronchitis, with elongated uvula. I immediately cut off the uvula, and gave her an anodyne expectorant, and in a few days I had the pleasure to see my supposed consumptive patient

perfectly well.

Another characteristic symptom in consumption is a shortness of breath on occasion of any unusual exertion, and a peculiar flushing of the cheeks, with heat in the palms of the hands, and soles of the feet. Occasionally the patient feels fugitive pains between the shoulders, in the sides, and sternum. But the most characteristic symptom is progressive emaciation.

In this condition the patient may continue for weeks, months or even years. His cough he ascribes to a cold; his pains to rheumatism, or neuralgia, until an attack of hemorrhage from the lungs excites alarm.

The symptoms now become aggravated; the cough becomes very troublesome, generally disturbing the patient's sleep at night; the expectoration is of a more purulent form; hemorrhage returns

again, and the patient is seldom long without a discharge of blood from the lungs. The dyspnoea also increases; the patient's tongue becomes coated, and his appetite impaired. The first stage is now at an end, and the disease passes sometimes abruptly, sometimes gradually, into the second stage. It is however not easy to draw a line of demarcation between the two stages, nor is it of much practical importance. The disease is to be

considered as being in the second stage only when a cavity, or cavities, exist in the lungs of sufficient size to give rise to certain signs. The symptoms of the first stage continue in the second, merely increased and aggravated by the existence of cavities. The most characteristic symptom in the second stage of phthisis, is the peculiar appearance of the expectoration, which is decidedly purulent, and, in well defined masses,

accompanied with copious tubercles in the shape of small, yellow, cheesy lumps of matter. The cough becomes more prominent, and is very troublesome in the morning, when the accumulations of the night are to be discharged from the lungs. The quantity of matter expectorated is in proportion to the number and size of the cavities; amounting in some cases to only a few ounces, and in others to a pint or more daily. The pulse in the second stage is more

accelerated than in the first.

The fever assumes a decidedly typhoid character; febrile exacerbations are often present, the heat of the skin becomes increased, especially towards the evening, and subsides with a gentle perspiration at night. The night sweats in this stage of the disease are often extremely distressing, and a source of great discomfort and debility. The appetite and digestion are also more or less impaired. The patient

experiences heat, pain and oppression at the epigastrium with nausea and vomiting which is occasionally very obstinate. Diarrhoea also is a symptom of the advanced stages; it seems to be dependent upon tubercles in the bowels, which by their softening and discharge, give rise to ulceration and inflammation. Occasionally a bulbous enlargement of the ends of the fingers with incurvation, is observable in this stage of the

disease. We also frequently find a remarkable brilliancy of the conjunctiva of the eye. These peculiar appearances are characteristic of tuberculous disease, but they are not pathognomonic symptoms. The mental condition in the second stage is not less characteristic than in the first; indeed there is generally a remarkable exemption from nervous disorder; the cerebral functions are very little disturbed, and the intellect usually remains

remarkably clear, unless the brain becomes involved in the tuberculous disease. Patients are sometimes occupied in forming plans for the future, when it is obvious to every one that they are on the verge of the grave. I remember, in passing through St. Luke's ward in the University Hospital, at one time, I was asked by a patient, reduced almost to a skeleton, whether I did not think that there was a chance of his recovery.

Sexual Symptoms. Nothing remarkable occurs in connection with the sexual function in male patients; but in the female the menstrual flow is very often arrested, which, of course, increases the danger; but the occurrence of pregnancy often arrests the disease for a time. I myself saw a young married woman who was laboring under phthisis, which, when she became pregnant, was arrested. nay, she also gained flesh and

it seemed as if she were actually recovering from the malady; but no sooner had she weaned her child, than all the former symptoms appeared with increased violence, and she finally fell a victim to that fell destroyer Consumption.

Physical Signs. These are very obscure in the early stages. The first that may be perceived is a slight dullness upon percussion and an obscuring of respiratory sound in that region, where the deposit

has taken place. One of the most characteristic signs of this stage of tuberculosis is a prolonged expiratory sound. As the consolidation increases, the respiration becomes rough and bronchial. The sounds of the heart are also heard more distinctly. As the disease advances dullness upon percussion is increased; the mucous and subcrepitant rales begin to manifest themselves, and when a cavity begins to exist we can hear a loose crackling sound during

inspiration and expiration.

The existence of a cavity may also be detected by a hollow tubular or tympanitic sound, such as is produced by striking the distended cheek.

Duration. The duration of phthisis is very variable. It may be rapid, slow, or intermittent. Some cases run their course to a fatal termination in from one to three or four months; while others have been known to

from thirty to forty years. The average term of this disease is from six months to two years. When the disease is very rapid, it is sometimes called galloping consumption, or more properly Acute Phthisis.

This disease generally runs its course in from one to three or four months.

Nature. Pulmonary tuberculosis is not, primarily and essentially, a disease of the lungs. There is first a morbid state of the system, which precedes and attends this

affection, and it most probably depends upon it. This state of the system is denominated tuberculous cachexia, dyscrasia, or diathesis. The exact nature of this cachexia is a problem which remains to be solved by future researches. The blood has often been found to contain a deficiency of nutritive material, and a less amount of red corpuscles in persons predisposed to phthisis.

Causes. These may be divided

into two kinds: first, those which act locally, or exciting causes; secondly, those which act generally or predisposing causes.

Exciting Causes. Anything which is capable of irritating the lungs, may act as an exciting cause; thus a very bad cold, or an attack of pneumonia, pleurisy or bronchitis, often develops tubercular disease. It has been supposed that the inhalation of acrid gases, as gas, stone dust, fine particles of

metal, is sufficient to give rise to tuberculous disease. This latter is very much doubted. Other exciting causes of tuberculosis are the suppression of long continued morbid evacuations; the healing of old ulcers, especially fistula in ano; and the cessation of menses, and excessive lactation. One of the chief exciting causes of pulmonary tuberculosis in the female is tight lacing; it is highly probable that by interfering with

the function of the lungs, it favors the formation of tubercles in those predisposed to them.

Predisposing Causes. The most influential of these is inheritance, that is to say, children inherit it from their parents, and they again entail it upon their offspring. Whole families thus descended are frequently swept away by this disease. The influence of cold may also be classed among the predisposing causes. In fact

anything that has a tendency to produce long continued debility in an individual, may be enumerated among the predisposing causes: as, an insufficient diet, unwholesome air, anxiety, grief, sedentary habits, and the influence of various debilitating diseases.

Diagnosis. A positive and an early diagnosis in cases of pulmonary tuberculosis is of extreme importance, both to the physician, and the patient.

But in the first stage there is generally much difficulty in recognizing phthisis. When a short, dry cough, quick, tense pulse, progressive emaciation, and increased animal temperature continue for some weeks or months, there is reason to suspect phthisis; and if to these symptoms an attack of hemoptysis associates itself, it will now complete the proof. But a positive diagnosis must rest mainly on physical signs.

Dullness on percussion with pro-
longed expiratory sound in-
dicates the presence of tubercles.
A tympanitic sound on auscul-
tation pointing to the existence
of cavities. The respiratory sound
obtained by auscultation is either
bronchial or cavernous. In addit-
ion to these signs there are several
others, which inevitably prove
the existence of tubercles in the
lungs; these are, fine mucous or
subcrepitant rales heard at the

summit of one side of the chest;
they proceed from circumscribed
bronchitis, excited by the presence
of tubercles.

Prognosis. The prognosis is in
the very great majority of cases of
pulmonary tuberculosis unfavorable,
on account of the fact, that the
mortality consequent on this dis-
ease exceeds that consequent on
any other, except those diseases
that prevail endemically or epi-
demically; but it does not follow

that phthisis is necessarily fatal in all cases; for with suitable treatment we often see its symptoms abate. The cavities may cicatrize and the patient recover; or the whole tuberculous matter and the animal portions may be absorbed, and the mineral constituents remain quiescent in the form of small tubercles, or they may be expectorated by the patient.

Treatment. As the deposition of tubercles depends upon a general or constitutional morbid condition

and as tubercles when once formed always run their course, the prominent indications in the treatment of phthisis are, to arrest the disease, or, in other words, to prevent a further deposit of tubercle, and to guard the system against their injurious effects during their progress. The first object therefore is to strengthen and invigorate the body; to accomplish this, the patient should take vigorous and long continued exercise in the open air, not such

however, as would cause great fatigue.
This exercise must be taken daily
and unremittingly, if possible,
for months or years. The patient
should also guard against the
depressing influence of cold, by
wearing warm clothing, such as
silk or flannel, next to the skin,
with sufficient exterior covering
to make himself comfortable. To
insure the advantages of warmth,
it may be advisable, if residing in
a cold climate, to remove, during

winter, to a warmer one. Preference should be given to a place which is at one and the same time dry, of uniform temperature, and within a convenient distance from the sea-shore. Next in importance in the treatment of phthisis is the regulation of diet, which should be generous as regards quality, quantity, and variety. The articles should be highly nutritious and easy of digestion. With respect to the kinds of food, there are no general rules; the patient should be

allowed any varieties of wholesome food which he is able to enjoy with relish, and which stimulate the appetite. We will now consider the remedies which enter into the treatment of this disease. Under this head we may enumerate alcoholic stimulants, which certainly exert a curative influence in certain cases; while in other cases this use must often be abandoned on account of the unpleasant effects they produce on the system.

What then will be the indications by which we may judge of the usefulness of alcoholic stimulants on the one hand, and their injuriousness on the other. In the first place, if they produce comfort and a feeling of strength and do not unduly excite the circulation or nervous system, a great deal of benefit may be expected from their use; on the other hand, if their immediate effect be discomfort, a feeling of

weakness and fatigue, and if they unduly excite the circulation and nervous system this use must be discontinued, or else they will do more harm than good. The method lately introduced of treating consumptive diseases by raw meat and alcohol appears to have been attended with wonderful results. I have myself tried it in one case, and the patient rapidly increased in weight and strength under its use.

Of all the medicines used in phthisis, none have hitherto proved so efficient as cod liver oil. It does not act as a specific, and is not capable of producing the removal of tubercular matter; but it invigorates digestion, and improves the quality and character of the blood. Clinical observation however shows that it is not useful in all cases. The question arises, by what criterion may we judge of its usefulness in the

heart, or its want of sufficiency on the other hand! For the first place, if it does not impair the appetite or digestion, and if the patient does not feel a dislike for it, a great deal of benefit may be derived from its use. But if it produces derangement of the stomach or bowels, its use must be suspended, for it will be productive of more harm than good. Certain pulmonary symptoms also claim attention. Tonic emetics

such as quinia, bitter infusions,
chalybeates, and the infusion of
wild cherry bark, which is an ad-
mirable tonic in pulmonary tuber-
culosis, are often used, when there
is great debility. Expectorants
are not so much used in this af-
fection, because they generally
diminish the appetite, disturb
digestion, and occasion nausea.
But remedies, to allay the cough
when it becomes troublesome or
violent, are frequently called

for, such as hyosciamus, conium,
belladonna, or hydrocyanic acid or
opium. Soothing inhalations
sometimes allay the irritation
which excites cough. Sometimes
the cough is produced or greatly
aggravated by an elongated
uvula, which, if it does not read-
ily by the administration of as-
tringents, should be amputated.
Occasionally there is much hyp-
noea, arising from nervous derang-
ment which may be treated by

nervous stimulants and narcotics.

The hemorrhages from the lungs frequently require attention; they may be treated with astringents, as acetate of lead, tannic or gallic acids, and persulphate of iron. Circumscribed pains about the chest, which are frequently connected with inflammation of the pleura, often yield to mild revulsive applications, as sinapisms and liniments; a plaster of Burgundy pitch or belladonna will often afford much relief.

Another source of great discomfort to the patient are the night sweats; these are best treated by the mineral acids, especially the aromatic sulphuric acid; frequently the gallic and tannic acids also afford relief; sponging the body with warm vinegar at bed time often gives relief. For the hectic paroxysms, the sulphate of quinia is the most effectual remedy. Diarrhoea, depending upon the deposition of tubercles in the intestines, must be kept in

cheerful hygienic and nutritious.

Lastly, the great debility in the final stage requires attention. The main object is to impart sufficient muscular strength to the patient to enable him to expectorate the secretions which accumulate in the bronchial tubes, which, if not discharged, will produce suffocation. Milk, panada, wine whey, egg with wine, beef-tea, carbonate of ammonia and alcohol may here be given; by these means life may sometimes be prolonged

prolonged.

I have now treated of Pulmonary Tuberculosis from its incipient to its final stage, having given a hasty sketch of its various symptoms and the necessary remedies. I wish that it had been in my power to do more ample justice to this important subject. But as I am merely a tiro, or to use plain English, a novice in the medical art, aspiring to the glorious and responsible vocation and duties of

a physician, and what little time remains for the attendance of the lectures, and attempting meditation thereupon in one's closet, I trust, that any shortcomings found in this thesis, will be ascribed to a want of sufficient time for thorough investigation. It has been my constant aim, from the day that I first entered upon the study of medicine, to become perfect as far as this is possible, in the

profession to which I am aspiring,
and for that purpose I have, day
after day, devoted every leisure mo-
ment to acquire new knowledge.
In conclusion I will say, that I
am proud of having had the
good fortune to attend the lectu-
es in the University of Maryland,
whose distinguished corps of
Professors, is equal to any in the
world. And my wish is: that
may God spare them for the
glory of Maryland, for the

advancement and diffusion of the medical art, for the welfare of the students that will hereafter flock to our great University, and for the benefit of mankind in general.

Quod bonum, felix, faustumque sit.

AN

Inaugural Dissertation

ON

Chloroform

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

Charles L. Kerr

Of

North Carolina

Session of 1858

Chloroform

"Is a terchloride of a hypothetical base termed Formyl which consists of two atoms of Carbon and one of Hydrogen. Hence the Symbolic designation of Chloroform is $C_2 H Cl_3$"

It is prepared by distilling rectified Spirit (pure alcohol) with water and Chloride of lime, in the proportions of four pounds of powdered Chloride of lime twelve pounds of water and twelve fluid ounces of

of rectified spirit. Mix the Chlorinated
Lime first with the water and
then with the alcohol in a
distillatory vessel of sufficient size
Then distil with a brisk heat till
the temperature approaches to 176° withdraw
the fire in order that the distillation
may proceed by the heat received solely
from the reaction of the materials.
When the distillation slackens renew it by
a fresh application of heat and continue
to distil until the liquid ceases to come
over with a sweet taste. Then separate

the heavier layer of the liquid which has passed over into the receiver from the lighter by decantation, having washed it first with ~~water~~ water. Then with a weak solution of Carbonate of Soda, agitate it thoroughly with powdered Chloride of Calcium and distill by means of a water bath, stopping the distillation when eleven-twelfths of the liquid have come over. The residue with the light liquid of the first distillation, may be reserved for use in a second operation. U.S. Pharmacopeia 1870

Pure Chloroform is a colorless liquid of an agreeable etherial odor, and sweetish taste — Tests when dropped into water it should sink without milkiness showing an absence of oils — If poured on a piece of blotting paper and evaporated ought to leave no oily empyreumatic smell. Chemical test is with Concentrated S O3 which gives a dark color if the Chloroform contain any impure oils &c —

Mode of Administration is a point which if properly understood & carried out will

do much towards convincing
medical men of its safety.
The following rules are those which
I have gathered from able lectures
and Text Books written by men of
experience and high professional standing.
It is the preparation of the patient
whose stomach it is always desirable
to have empty — i. e. if it be
full vomiting is apt to ensue
followed by the ill effects which
may accompany the act. Namely the
danger of rupture of the tympanic

Matter entering the larynx, the additional
expansion produced by emesis - and
if the patient have a diseased eye
it is apt to be plainly appearing
over strained - again if the
stomach be full the movements
of the diaphragm are hindered
thus impeding respiration, the clothing
of the trunk should also be slack
so as to permit the free expansion
of the thoracic and abdominal
parieties - Here the physical condition
of the patient should be noticed

for there is perhaps danger in using Chloroform in those cases where there is disease of the substance of the heart, such as fatty degeneration or dilatation, owing to the relaxation which Chloroform produces on the muscles, and consequently the difficulty in maintaining the circulation of the brain through the heart's action. Valvular disease of the heart alone is not likely to be followed by serious results

In Phthisis pulmonalis where much of the lung tissue has been broken down Chloroform if possible should be avoided for if the blood naturally is not oxigenated, its administration would only add to the existing trouble - If the patient is a female a witness should always be present as they sometimes entertain ideas not pleasant to the Operator.

2nd Gen: rule: Is to always measure the Chloroform. Some persons from an idiosyncrasy require a very little

that it is best to commence with
a half drachm - A drachm is the
usual amount to begin with repeating
with a drachm at a time when
necessary.

3rd For the safety of the patient
it is indispensable when using so
potent an article that he should
have an abundance of atmospheric
air.

4th The patient should always be
in the recumbent posture.

5th A cool and confident manner

is always to be desired who should
have nothing to attend to but the
administration of the medicine.
A napkin folded in the shape of
a cone with both ends open;
is impregnated with a drachm of
chloroform and held over the mouth
and nose at a distance generally of
about two inches being gradually
brought nearer and nearer until
it is within about half inch beyond
which it should never be carried. Care
always being taken not to allow any

of the liquid to touch the skin as excoriation might ensue.

As soon as sensibility is completely abolished the operation is commenced. This may be tested by raising the Eyelid and touching the conjunctiva If the patient allows this without twinkling the desired effect has been produced-

Modus Operandi of Chloroform.

The precise manner in which it acts on the nervous system is a point of controversy. And one which has not

been clearly demonstrated - Perhaps
after being absorbed into the blood
from the lungs. It is conveyed to the
nervous centres, and acts on the
ultimate nerve structure.
That it acts through the blood
is proved by the fact, that if
a ligature be placed around
a limb so as to interrupt the
circulation: the sensibility of it
exists even after the other parts
have become insensible

The Effects of Chloroform on the Animal economy, may for practical purposes be classed in the following degrees

The first or that of exhilaration is characterized by excitement of the nervous and vascular systems indicated by the quickened and stronger pulse the flushed face and suffused eyes - which have with a wild expression denoting the mental activity - now approaching such a degree that prudence is

is ignored and the expressions of
the patient begins to reveal his
peculiarities of temperament & habit-
at this time the second degree
or abolishment of the mental
faculties supervene the intoxication
is now complete and in this stage
we all the varieties of human
dominions display themselves; one
man may laugh at jokes of his
own making, another is noisy or
inclined to show his pugilistic skill
whilst the third may weep

reveal his previous vocation - These phenomena are not universal, and even when present are of short duration. For if the inhalation be continued the third stage comes on characterized by a "Vaudeville" of voluntary motion and sensation the eyes turned upwards, the breathing slow as in natural sleep. Though the reflex movements are still perceived such as sneezing when the nose is tickled; showing that even in this stage the patient is not prepared for prolonged or severe surgical operations.

The fourth degree or that of perfect insensibility is distinguished by the profound sleep— relaxed condition of the muscles, and the loss of reflex sensation and motion At this point the eyeball may be touched without winking. Here the fifth rule laid down under the head of "Administration" has been carried out. And the operation should be commenced.

If Carried further the fifth degree or the condition of Coma comes on. Marked by slower breathing, and a tendency of the pupil to dilate. And

and if the inhalation be still continued death will consummate the tragedy—
Though the wise Surgeon and the accomplished physician know full well that so potent a medicine can cause death and they do not carry it to such an extent. Then when Chloroform is judiciously used does it deserve the censure which many heap on it? Can not death result from Opium, the king of drugs? The experience of Surgeons in the recent war where Chloroform was daily used pronounce it safe not only

its words, but by the number of its
Medical converts; Many physicians
how readily use it who did so formerly with
considerable reluctancy. One practical point
may be learned from its successful
administration on the "Heated Field".
That is the abundance of Atmospheric
Air. Operations being seldom performed
in close rooms.
Ether was once heralded and reclaimed
as the great Anesthetic, but brilliant
as its career may have been, it was
only destined to be eclipsed by Chloroform

The anesthetic virtues of the latter being so much more pleasant and the sleep more profound are not the only the only points which give it the superiority to Ether. Other advantages equally desirable are possessed by it; among the more important are first the rapidity of its anesthetic action; secondly a smaller amount of laryngeal and bronchial irritation. Thirdly its influence being more easily maintained and lastly it is not so apt to produce vomiting. However to speak of its superiority to Ether is not the province of me

humble Medical Student, the wise and investigating minds of the learned Chemist and Therapeutist with the practical Surgeon, will in the future, as in the past, define its virtues and attest its usefulness.

Chloroform is undoubtedly one of the greatest boons which a Kind and beneficent providence has bestowed upon Man; not only is it preeminent for the prevention of pain, But let the Surgeon and patient of the present day, contrast their condition

with those of former times, when
one was writhing in pain and
agony during a tedious dissection since
the other had his progress continually
hindered by the struggles of the sufferer.
It does away with the scruples of
the over modest woman to whom
the shame of exposure is worse
than the pain of the knife.
It adds quickness to the Surgeons
knife and clothes his dexterity grace
and elegance, to advance the glory
of his profession without the
disgusting struggles of the one who
is not often moaning under the
agonies of approaching dissolution.

In short it rules that great force the nerve power submissive to the scientific manipulation of man - That force which animates the fearless elephant as he moves majestic over the plains; or the little tiger and lordly lion as they leap tremendous and make the heart falter in its beat by their unearthly roar - That force which sends up from the depths of the troubled and frigid ocean the mighty breathings of the great Leviathan; or under whose life inspiring influence the eagle wings an unchained wing across the rolling deep screaming wildly his cry of

of delight to the great source of
his power. That force wherein
exists the genius of man is bowed
irresistibly to the honest courage of
the qualified Surgeon.

I am Sirs your most obedient Sert.
and attached Student.
Chas: Stevens Kerr.

Baltimore Md
Feb the 14th 1868

AN

Inaugural Dissertation

ON

Acute Bronchitis

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

M. Giddings

of

Loudoun County Virginia

Session of LXII 1867 & 68

This disease so frequently affecting, some of the most important organs, in the human economy, occurs in almost every clime to those of the inhabitants, who are most subjected, to the vicissitudes and sudden changes, of the atmosphere— But we find it attacking, sometimes, the old and young, the feeble, and robust, it having its effect upon those fortunate individuals, who are happily blest, in having a good constitution, as a

modifying agent against
the effects of this disease.
And yet it is not so fatal,
or as much dreaded as many
diseases. Still it from its
frequency owing to the many
exciting and predisposing causes,
"Makes countless thousands
mourn"

Bronchitis, Symptoms.

"inflammation of the lining mucous Membrane of the bronchial tubes", to which organs particularly, ordinary Bronchitis is limited.

A much graver though less frequent form is developed, when the inflammation extends to the fine ramifications, this is called Capillary bronchitis Several different forms of this disease, may exist according to the location, duration, and intensity, of the inflammation. It may be primary and

secondary to other pulmonary affections, also occuring as a complication with Pneumonitis Pleuritis &c, sometimes prevailing epidemically, this form known as Influenza, these several varieties claim separate consideration, and must give precedence, to the investigation of ordinary acute Bronchitis.

This affection, is generally preceded by Coryza, the inflammation commencing in the nostrils proceeds downward to the bronchial tubes, the period of progression, varies from a few hours to as many

days, The disease is usually ushered in by a distinct chill, but chilly sensations occur, followed by flushes of heat; pain is not a prominent symptom, yet the patient feels a sense of tightness, and rawness, in the chest; The pain present is of an obtuse character and is felt under the sternum, being very much increased by coughing; this cough being produced by the rough condition of the mucous membrane lining the bronchial tubes. Lassitude and headache with pains in the limbs are complained of with general malaise

The urine is scanty and highly coloured during fever, in the onset. The febrile movement is generally moderate, and the pulse is not so frequent and strong as in Pneumonia &c, while the heat of the surface is not much raised. The cough at first is quite troublesome though not very painful, it is mostly dry the the secretion being scanty with little or no expectoration, deep inspiration & cold air excites coughing which occurs in paroxysms, the patient seems anxious to expectorate, and feels

much better when the cough becomes loose. In the first stages the expectoration is small, glairy frothy, and viscid, occasionally mixed with blood, after 3 or four days the expectoration becomes more abundant and consists of thick yellowish sputa, the fever subsides and pain is abated while cough is much less frequent as the amount of mucus increases, the inflammation decreases.

The lungs are not much affected in Bronchitis, but owing to the congregation of mucus in the tube respiration is somewhat embarrassed.

The patient should be kept in bed, with the proper amount of covering.

This disease is devided into two stages, the first during secretion & expectoration, when the fever and pain is most marked, the second from the termination of the first period to convalescence, the average duration of Bronchitis being from six days to two weeks.

Causes. Primary or idiopathic bronchitis is frequently if not generally produced by cold; Exposure to this agent produces the disease by interupting the elimenative functions of the skin, thereby increasing the duty of the

pulmonary mucous membrane, and inducing internal congestion.

The exposure of the body to currents of air is most liable to bring on an attack of this disease, while it is concluded by some that it is due to some morbific agent or at least to some special atmospheric change.

Bronchitis occurs secondarily and forms elements of other diseases.

Belonging to the clinical history of rubeola it may occur with typhoid fever and is then synchronous but when developed with pulmonary affection is circumscribed.

It can be produced traumatically

by the local action of inhalation
gases for instance the inhalation of
chlorine gas and the fumes of
sulphuric acid, In some persons
owing to an idiosyncrasy the
susceptibility is so great that
the most ordinary substances, and
even fragrant odors will produce
it. Those persons who live mostly out
of doors, are less liable to bronchitis,
and likewise it affects those most
frequently who remain in warm
apartments

"Diagnosis. Acute Bronchitis is to"
be distinguished from Pneumonitis
and Pleuritis, and especially from
the former. The points relating
to the symptoms which are involved
in this differential diagnosis are
as follows. The absence of the
lancinating pain, the pain in
Bronchitis being substernal,
the presence of more or less expec-
toration, which is not rusty, but is
without blood or containing it
in streaks, the absence of dyspnoea
and of the circumscribed flush of
the cheeks. These points are however
rather negative at least not

sufficient for a positive diagnosis in all cases. The clinical history however with the result of physical exploration, makes the diagnosis sufficiently positive.

Percussion elicits the resonance of health. The vocal resonance very clear throughout the chest. The respiratory murmur may be weakened, but is not otherwise altered. Abolition of the pectoral murmur may arise from an accumulation of mucous in some of the tubes.

Auscultation reveals very obvious changes, the three characteristics of,

first, sibilant rhonchus, if the disease be seated in the smaller tubes. Secondly, the sonorous rhonchus if it exists in the large tubes. And lastly, the mucous rhonchus commingled with the others heard as the disease advances and as expectoration commences.

These points exclude the possibility of pleurisy or pneumonia being present, while the dry and moist rales may or may not be present, the presence of these always indicating Bronchial trouble, but the absence of the disease must not be inferred because these signs are wanting.

at the time of examination, "
"Progress" Ordinary acute bronchitis
not connected with other affections
is only dangerous when it occurs
in the young, aged and the feeble
The danger to these patients is
from the accumulations of
mucous and the inability of the
patient, two feeble either from youth
or age to expectorate.
Ordinarily it passes through its
course and recovery is complete,
or it may terminate in a chronic
case, It often gives the patient
much trouble and causes some debility,
but as a rule it terminates favorably

The treatment of bronchitis varies,"
according to the age and condition
of the patient, as well as in the
different stages of the disease,
The abortive treatment of cold in the
in the chest, may sometimes be affected
by the patient taking at bed time,
hot punch lemonade or dovers powders
with a warm foot bath, Should this
fail a saline purgative is often
of use and when the cough is tight
with sore chest & high fever expectorants
and demulcent drinks are advised,
When the disease is established it
does not claim very active treatment
as with good hygenic regulations

it mostly leads to recovery.
Bloodletting is very seldomly used except
in cases of plethoric persons or
where the sympathetic febrile
movement is very high. Depletion
by Leeches and reduced diet is
sufficient, though in the majority
of cases the patient should have
nourishing diet, and the powers
of life kept as near the normal
standard as possible by stimulants
if they are required. In severe
attacks the patient must be confined
to bed to secure uniform warmth
and moisture of the surface,
diaphoresis allows the inflammed

Membrane, and should be promoted by small doses of antimony or ipecac; these remedies must not be continued after the first stage, that is prior to free expectoration. A moist atmosphere in the apartment gives much relief to the patient by its soothing effects on the affected mucous membrane. Moderate perspiration makes the patient more comfortable, but night sweats and copious perspiration, is very disagreeable, and should be prevented by a few drops of aromatic sulphuric acid given "ad libitum"

Opium by many is supposed to be contraindicated in the first stage by interfering with the free secretion of mucous and further by rendering expectoration difficult. This inference is drawn from the effects of this drug in health, but on the contrary in disease these effects are not the result of its use, in fact it seems to hasten the second stage.
Hence we conclude that opium is indicated in the onset of bronchitis, as it is in most acute inflammations.
When the cough is very frequent,

more as there is required to move the morbid product from the affected parts; there is opium indicated to control the cough during the acute stage of soreness and pain in the chest be prominent local applications are found to be of much service, sinapisms and stimulating liniments are useful and sometimes blisters act most favorably; if the affection lingers and tends to become chronic, the sulphate of quinia and other tonic remedies and counter irritants with

good diet, are the most efficient
measures for recovery. The chloride
of potassa has been found useful
in bronchitis. Turpentine stupes
with warm hop poultices
are of the greatest benefit —
Here now I close this imperfect
essay, and respectfully submit
the same to the inspection of
the honoured and esteemed
Faculty of our chartered
Alma Mater.

W Giddings

An Inaugural Dissertation

On

Opium

Submitted to the Examination

Of the

Provost Regent & Faculty of Physic

Of the

University of Maryland

For the

Degree of

Doctor of Medicine

By

J. T. Price

Of

Maryland

1864.

Conscious
at once of the magnitude
of my subject; the necessarily
limited nature of this es-
say, and my own deficien-
cies. I confess gentlemen,
I approach my work with
timidity.
Men of profound learning,
varied experience, [illegible]
some instances more than
half a century, have written
volumes devoted to the

[illegible] and
destructive properties of
Opium.
After all, the subject resolve
itself into strange sim
plicity, and whether I
pour over Dioscorides or
stimulate my imagina
tion with the dreamy expe
riences of a Quincey, I am
forced to rate opium as
the most important [illegible]
treated of in therapeutics.
[illegible] has been [illegible] ac
[illegible]
all ages of which we have

record and in all countries.
Though it was ~~xxxxxx~~ ~~fo~~
reserved for modern time
to analyze this [illegible]
[illegible], thereby abstracting [illegible]
the concrete crude mass the
[illegible] most important
in [illegible].
From the juice of the white
Poppy, a plant of the [illegible]
[illegible] [illegible] [illegible]
ed in the following [illegible]
[illegible]. (It is a fact [illegible]
of note that ~~xxxx~~ [illegible]
[illegible]
manner of collecting [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

of the common garden poppy,

[illegible]

the gaudy corolla rests upon

an ungainly capsule of which

it forms as it were a crown.

In this green capsule they,

for [illegible] the [illegible]

[illegible] juice, when the [illegible]

has nearly reached [illegible]

[illegible]

[illegible]

Silently exudes the milky
[illegible], which is to [illegible] the
sick, soothe the dying or
curse a nation as may be
the case. In the course of
time, the juice concretes in
a brownish mass, is scraped
off and collected into [illegible].
The wounded capsule yields
[illegible] the [illegible], then
[illegible] in
[illegible] efforts. [illegible]
[illegible] having given [illegible]
her one drop of balm [illegible]
[illegible]
Various states, both in [illegible]

each constituent is some
what increased by this might
agent. [illegible]
[illegible] then the [illegible]
be a compound, which
fully analyzed and resol
ved into the primitive el
lowe ingredients—of which
the first only are elementa
ry: all the remainder com
posed of "Hydrogen", "Carbon",
"Oxygen", "Nitrogen", "Sulphur",
"Phosphorus", "Iron",
"Silicon", "Potassium", "Sodium",
"Calcium", "Magnesium", and

"Bassorine".

"Lignine"

No greater triumph has been attained by pharmacopolists in this or any day, than that of separating Morphine from its constituents in the opium mass.

To this ingredient indeed opium owes its medicinal virtues and with meconic acid constitutes its only [illegible] [illegible] elements.

The quantity of pure muriate of morphine contained [illegible] in the best opium, is from

6.25 to 7.50 per cent.

This per cent is found in Turkey Opium, bought a
variety, grown in Germany.

brought,

opium,

United States, reaches the
enormous figure [illegible]
thousand eight [illegible]
[illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible] for which Quinine is
[illegible].

[illegible] enumerate [illegible]
seases in which [illegible]
[illegible]
[illegible]
[illegible]
in Quantity required: [illegible]

[illegible]

[illegible]

[illegible]

the propriety of its admin-
istration, deduced from it
[illegible]

[illegible]

leave much ground unoccupied
[illegible] lay down a broad prin-
ciple from which it would
be really necessary to deviate
in many instances.
He says that [illegible]
stimulant, yet not for this
but for its secondary result,
its [illegible] effect. [illegible]

[illegible]

[illegible].

In cases of an inflammatory character, where Opium has been successfully employed, such as Inflammatory rheumatism, steps are first taken to allay inflammation or this drug is combined with others calculated to produce that effect.

Again, Narcotics possess this peculiarity in a more eminent degree than any other remedies of the Pharmacopoeia, repetition lessens their action upon the system, so that each repetition

of the administration requires an additional quantity to maintain the proportion in reserve.

In catarrhal affections, where it is necessary to lessen the mucus secretion, the administration of opium is judicious. Where the secretory organs are languid, opium would have a tendency to diminish the bronchial secretion and retard expectoration.

The importance of knowing fully the effect of opiates upon the various secretory organs cannot be over estimated.

The testimony of men of experience, furnish us with the following data. It diminishes the secretion of Gastric and Pancreatic juices, the mucus of the bowels the bronchia and nose, and the secretion of bile. On the other hand, it increases the serous secretions.

Further, its sedative or secondary qualities recommend it in all cases to allay pain or nervous irritability unattended by inflammation in the affected parts.

No disease can be success-

fully treated, no remedy properly applied, until we penetrate the cause of the one, fully weigh the universal affects of the other.

For instance, what but a deep insight into causes and a full knowledge of opium, properties would ever suggest it as a remedy for constipation? Taken in health, it is a powerful astringent, administered during a less state of contractility or sensibility of the bowels acts as a gentle aperient, the only one, in some instances at our mand; so that, we might

almost share the superstitions of the highly imaginative inhabitants of tropic lands, which attribute to this drug, human intuition and a sentient action.

As to the manner in which opium is administered, we may state, that in cases where immediate action is desirable, the tincture should be given.

Some persons cannot take pure opium — to meet such contingencies, various compounds have been formed, possessing, each its peculiar merits, up

plicable in peculiar circumstances. For a proper knowledge of the use of which, we must [illegible] upon our own judgment.

External applications or embrocations, are good in allaying local disorders, where its use internally might prove injudicious. It may also be given in enema.

I will briefly enumerate the many diseases in the treatment of which, opium has been successfully employed. It is applicable in all febrile diseases, when any of the vital organs are in a state of morbid

chronic catarrhal affections, even in acute affections of this sort, where inflammation has been somewhat subdued, opium may be employed ~~ex~~.

In advanced stages of Phthisis, it is almost the only palliative employed. In the treatment of small pox, it is often of essential service. Where the eruption does not appear fully in Scarlatina, opium combined with a diaphoretic is of service. In the treatment of Dysentery, it is most indispensable. Though not the first medicine to be

employed in Cholera yet it serves greatly to allay irritation, should be given in large doses.

Opium, owing to its tendency to affect the brain, cannot be employed with impunity in "Cholera infantum". The cerebrum being more or less affected by this disease In Diabetes, it produces beneficial results; its action is, to increase the specific gravity of the urine. An eminent Physician claimes to have cured ten out of 18 extreme cases of Diabetes by the use of opium. In Dyspepsia, "mania porta", "hysteria",

in fact in all cases where the nerve must be sustained, soothed and rested, this is a powerful auxilliary.

Pain modifies the narcotic effect of opium on the system. Doses which taken in health would completely prostrate or even annihilate the vital functions, are given in acute pain without injury; as unerring as the arrow from an experienced hand, it penetrates to the disease, masters the agony and is itself robbed of its death dealing power by the struggle.

We regard opium then, as an agent possessing three fold powers. We have already ~~[illegible]~~ viewed it as a palliative, then as a curative, and lastly it remains to consider it as a destructive agent.

In the early part of this essay, I remarked that "Opium given in large quantities is a narcotic poison acting on the brain."

In such cases, death is instantaneous. Alas it is in a very small minority of cases that Opium thus slays its victims! Hardly ~~[illegible]~~ insidiously, it works, it not unusually for years, ere it

unhappy victim succumbs, says a
late writer "God seems to help
a man in getting out of every dif-
ficulty but opium! where you have
to claw your way out over red hot
coals on your hands and knees
and drag yourself by an un-
strength through the burning
dungeon bars"
The use of opium as a narcotic
destroys the superficial nerves
of the stomach.
The first months of the person
who has become an opium eater
abound in delightful sensa-
tions; the victim is not even con-

cious of any mental thraldom.

The first suffering comes from a sense of this intellectual bondage and in the effort to throw it off the sufferer first discovers the physical hold it has upon him. The average opium eater will attain to as high as 12 grains of morphia per day, in ten years. In such cases, the stomach undergoes complete disorganization death must ensue from its disintegrating effects on tissue. So that, having reached the stage above mentioned, to abandon or pursue

~~[illegible]~~
the habit is equally fatal, only in the first case, the victim dies in inconceivable torture.
The opium eater dies either in collapse through nervous exhaustion or in the midst of physical or mental agony with a colliquative Diarrhea.
In either case, the end of the Opium eater is most horrible.
Antidote in poisoning by Opium
if seen at first evacuate the stomach either by the stomach pump or by a prompt emetic sulfate or ep cac
if these are not at hand we may

use mustard warm water. Keep the patient aroused; and supporting the system when it begins to sink use diffusible stimulants. Belladonna has been recommended from its common effects upon the pupils of the eye and its tendency to cause wakefulness.

Y

AN

Inaugural Dissertation

ON

Epilepsy

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

James H. Stokes

of

Frederick, Maryland.

Session of *1867-68.*

Epilepsy —

beyond a doubt the [illegible]
the disease; and [illegible]
specially the great [illegible]
the brain. What [illegible]
the precise state [illegible]
[illegible] matter [illegible]
determines the [illegible]
sciousness and [illegible]
[illegible]
[illegible]
what in the relation [illegible]
the arterial and [illegible]
[illegible]
head; a tempo[illegible]
are somehow arising [illegible]
[illegible] of blood [illegible]
[illegible]

[illegible]d are the [illegible]
[illegible]s.

The disease [illegible]
[illegible] age nor sex [illegible]
[illegible]th alike. On [illegible]
[illegible]
[illegible] going along [illegible]
[illegible]easured step, [illegible]
[illegible]uddenly he [illegible]
in violent conv[illegible].
Again you [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]ithes as if [illegible]

conscious.

horse. They usually
full forward thereby dis

his teeth,

the sudden closure of

any stronger symptoms.

With respect to the cause of epilepsy there is little brain there are however a great many suppositions. Among the most prominent are strong mental emotions, the abuse of spirituous liquors, the too frequent gratification of sexual desires and more especially that great vice masturbation. There are other predisposing causes such as spicula of bone, multiple from wounds, of the head infringing on the brain

However I will get on to the diagnosis of the disease. Epilepsy may be confounded very readily with several other nerve disorders as hysteria & apoplexy, but more especially the former. Indeed it requires very frequently the strictest attention to diagnose the one from the other. There are, however, certain unmistakable symptoms which will always enable one to recognise instantly the disease. As I have

said hysteria is frequently taken for epilepsy but we may sometimes diagnosticate between them even from the statements of the patient's friends. For instance, in epilepsy there are no alternate fits of sobbing or laughing, no gradual development of the paroxysm, no globus hystericus, a feeling as of a ball rising gradually from the stomach to the throat symptoms unmistakable of hysteria. Whereas, on the other hand, we have, in epilepsy great distortion

of the face, dilitation of the pupils, frequent wounding of the tongue, foaming at the mouth and a heavy comatose sleep succeeding. Epilepsy attacks both sexes alike, whereas hysteria predominates in females. All these are sufficient to enable us to distinguish between the two. There is much diversity of opinion with respect to the convulsions of young children being epileptic in their character. Now whether or not it is so, is undetermined

but almost every physician entertains the hope of their being outgrown, which, I believe, is in many instances the case. It has been for many years the practice of beggars and others to feign the disease and it is of the greatest service to be able to detect their charlatanry. In hospitals we frequently meet with cases of this kind, where the trick has been resorted to merely to get admittance. In the army or navy it is of the utmost importance to be able to expose them.

It is often met with among the mendicants being resorted to in order to excite sympathy, thereby driving a more lucrative trade. It is easily detected from the true disease, and by very simple means. When it is feigned there is no loss of sensibility, although great pain is undergone before they yield, no dilitation of the pupils nor biting of the tongue. They never have the attack in dangerous places and always where they will be noticed.

The most efficient means of bringing them to their senses is to speak within their hearing, of severe applications as a hot water douche, and such like remedies.

As to the prognosis of epilepsy little is to be said. There is scarcely any immediate danger to be anticipated. It seldom happens that a person dies from the effects of the malady. But nevertheless the prognosis is rather unfavourable as respects the

permanent cure especially if it arises from centric causes. But it is to be hoped that when it proceeds from excentric causes as the presence of a calculus or some sorry substance, that the removal of the same will carry with them the disorder. The circumstance most to be dreaded is the impairment of the brain. When the attacks are frequent there is more or less derangement of the brain and if the frequency persists there succeeds marked imbecility.

When the malady occurs to parturient women and young girls approaching the period of puberty, it seldom or never exists longer than such periods. Also the spasms of children during teething epileptoid in character rarely ever continue longer than the period of dentition.

There is little or no hope of a permanent cure in cases of long standing especially if there is any reason to believe that it was inherited. Persons subject to epilepsy are more or

less delicate, and so it tends to ruin mind and body.

Finally I have to speak of the treatment. Were I to attempt to enumerate the different remedies used by different authors in this disease it would consume a vast deal of time. I suppose there is no disease to which mankind is subject in which so many fruitless attempts have been made to arrest as epilepsy. It seems as if the whole vocabulary of medicine had been exhausted and

still there is room for improvement. There may be in every case, remedies palliative to a great extent; but there are very few which bring about a permanent cure. The patient may be relieved for weeks months or even years; but its return is almost certain.

The treatment may be resolved into two kinds namely, that during the spasm and the means to be resorted to in the interval. That of the former is simple and consists

merely of keeping the pa=
tient from injuring himself
by holding him, and of the
interposition of something
between his teeth as a piece
of wood or the handle of
a spoon in order to prevent
him from biting his tongue.
His head should be somew=
what elevated and any
part of his wearing appar=
el which restricts him
should be loosened. Pu=
ty of fresh air is desira=
ble and the chafing of
the fore head and temples
with brandy is said to

ce of service. There are a great many domestic remedies, some of which are often beneficial. There is therefore little or nothing to be done during the paroxysm.

As to the curative treatment much more can be said. In the treatment of the interval days Dr Wood, there are two prominent indications namely first to remove all appreciable or possible sources of irritation to the brain and secondly to [illegible]

that organ less sensitive
to morbid impressions or
better able to resist them.
To bring about the former
we should satisfy ourselves
as to the habit of the pa-
tient whether he be plethoric
or anemic, and endeav-
ous to affect a change. If
the use of a gross habit his
diet should be very simple
and the administration
of some of the saline cat-
hartics would be advisa-
ble. It has been recommend-
ed to deplete the patient
under such circumstances

but the practice has become obsolete.

Should he, on the other hand, be anemic the same precaution should be taken to improve the impoverished condition of the blood. The simple bitters, a nutritious diet moderate exercise & sea bathing are recommended.

Everything calculated to produce mental excitement should be carefully withheld and if the patient be of a calling requiring great taxation of the mind

he should immediately give it up. All disorders in whatever part of the body existing, should be carefully attended to.

The second indication of the treatment is to render the patient less excitable. Narcotics are beyond a doubt the best class of medicines to equalize excitement and are consequently to be immediately resorted to. The system should be strengthened by tonics. Of these the mineral tonics seem to be the

most efficacious. The ni=
trate of silver has long
enjoyed a great reputation
in this disease but it has
gone into disuse on account
of its producing a discolor=
ation of the skin. It should
therefore be seldom used
as there are cases on record
of persons becoming black=
ened for life. The dose
is 1/4 gr to 3 or 4 grs 3 times
a day in pill form. Other
mineral tonics, as the prep=
arations of copper & zinc
have been much lauded
and possibly with reason.

Another remedy sometimes employed is arsenic, but which is hardly advisable since it requires to be exhibited so carefully. Also the preperations of iron have been sometimes used.

Of the nervous stimulants, valerian, asafoetida, musk & camphor have enjoyed equal reputations. There are others also but the above seem to have acted more beneficially.

Belladonna is thought to be very useful by some authorities. I saw a case of epilepsy treated with belladonna with very happy results. The dose was 1/4 gr three times a day.

Stramonium is thought by some to

be of service but there is but little reliance to be placed upon it. The bromide of potassium has lately come into notice & is said to be very prompt

With these few remarks I submit to you my Thesis, hoping that its many imperfections may be overlooked & that it may meet with approbation at your hands.

Very respectfully
Yours.
Jas. N. Hoke

AN

Inaugural Dissertation

ON

Food

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

Gilbert C. Greenway

of

Abingdon Virginia

Session of 1868

Food —

G. C. Greenway

Food

By food we mean those substances, which being taken into the mouth, and carried from thence through the alimentary tract, are appropriated by the system for its own nourishment and repair, whatever then nourishes the system is food, and is always found in the organism as a constant or integral element, either forming a part

of its structure, or one of the conditions of a vital process. If this definition be correct (and we presume it is) both organic and inorganic substances, being nourishing, are food. Food is an excitant to every living animal; Mr Lewes describes it as the motive power of every human action underlying the nobler impulses, as well as the brute instinct

Dr Draper describes the geometrical spider Constructing a net or web and awaiting its food, the ant bear as digging a pit in the Sand, and the Lions and tiger as hunting down, or lying in wait to spring, manuvres upon their prey; thus making some animals rely upon Labor, some upon force, and some upon fraud for their supply of food. Man depends upon all. It is a

communicating, confession that
godlike mind, that character-
izes man from the lower ani-
mals, that thinking principle,
that is able to soar the heights
and depths of the scientific,
philosophical and imaginative
world, is so intimately associa-
ted with the Corporeal, as
to be under its control; yet
such is the mysterious Con-
nection between Mind and
matter that the former is depen

dent upon the latter for its existence. The stunted body will so degenerate the mind, that losing its noble and humane qualities, it exhibits only brute instincts! This is noticeable not only in cases of extreme exhaustion of body from the want of nutriment, and from other causes, but also in the intermediate stages. — The Ancients tell us that "Mens sana in sano corpore". We

might apply this test for all
the light of modern science
illuminate this truth — ap-
parent Exceptions may appear
of giant minds in weak & en-
feebled bodies, but no one,
we presume, will ascribe this
mental greatness to the bodily
feebleness; but rather believe
the mind great in spite of
the bodily condition, but yet
weaker than the same mind
under more favorable bodily influ-

ance. In the Physiological world, as in the Natural, the condition of life is death, we have waste and repair constantly going on. Each anatomical element in the body demands food to supply the waste occasioned by the activity, Each motion of a muscle, or forming of a thought within the brain. to do this we must introduce substances from without, which by an organic apparatus admirably adapted

for its ends and purposes, known as the "Digestive Apparatus", are rendered Soluble; these Substances in Solution are placed in the vehicle. That is to transport them to where they are needed; the vehicle is the blood; the transformation of these materials into tissue is known as Assimilation. Into the composition of this nutritive fluid all the substances enter. the Inorganic. the Hydrocarbons, and

Nitrogenized Substances. and
all contribute to form tissue:
the classification of Leibig.
who divided these into the Nitrog
enous and Non Nitrogenous, and
asserting that only the Nitrogenous
were capable of being converted
into blood, whilst the others were
Respiratory, does not prove correct:
the processes of Physiology of
modern times is based not upon
Theory, Chemical or otherwise;
but upon Observation; and

This prevents us from accepting the Theory; the Experiments of Dr Edward Smith, recently promulgated, go to prove exactly the reverse. and his classification is into Excito Respiratory and Non Excito Respiratory. the former being the Nitrogenized Substances. The Theory of Liebig may be true to the Chemist, but the Physiologist reckons every Substance found in Normal blood as a constituent of it

and he can not give undue value to any class, where all are indispensible. All these substances are held in solution in the plasma, which with the Corpuscles added, form the blood. The Corpuscles are biconcave, spheroidal discs of homogeneous structure, (not nucleated in man as in the inferior animals as birds, fish and reptiles) and they form about fifty per cent of the entire blood, and are held in

suspension by the plasma.
Physiologists differ as to their origin, some with Virchow, Robin and Dalton at their head, contend that they are produced in the blood by Genesis (what this conveys is not very clear); others with Lionel Beale and Draper, that they are formed from the White Corpuscle (which their opponents declare to be the degenerated Red) — but be their source what it may it is universally agreed among them

that its office is to convey Oxygen
to the tissues. to perform this function
equally well be it derived from either
source; this Oxygen at first taken up
by the plasma and then transfered
to the Corpuscles. where it is held
in a loose state of suspension so
as to be readily given off. The
food being placed in the mouth is
carried through the Oesophagus to the
Stomach, acted upon by the gastric
juice the greater part is digested and
absorbed by the capillary absorbents

in the walls of the Stomach; the remainder passes through to be acted upon by the intestinal juices and is taken up by the capillary absorbents of the small intestines; those capillaries convey it to the veins, the Gastric, Splenic, Superior & Inferior Mesenteric, which unite to form the Portal vein, conduct it to the liver — after circulating through this organ it is conveyed by the Hepatic vein to the Ascending Vena Cava to the right Auricle of the heart

Other substances of the food are absorbed by the Lacteals or Lymphatics in the small intestines and are conveyed by the Thoracic Duct to the left Subclavian vein. Thence through left innominate vein into the Descending Vena Cava by which they are also carried to the right side of the heart – from thence in the right side of the heart are all these substances mingled whatever modifications they may

have undergone "En route". So intimately connected are all the processes of Physiology that in order to understand thoroughly and describe properly the one, we must also take into consideration the others; they are so blended that we must consider them correlatively. — Thus to point out how food nourishes the System by and through the capillaries, we must describe its manner of entrance into the blood, and then point out how the blood containing this

food is carried to the capillaries=

in order to describe Nutrition we must

consider Digestion, then Circulation

which involves Respiration, they are

all so related. We have described,

as far as our purpose demands,

Digestion. and we left them digested

materials, carried by the veins and by

the Thoracic Duct, mingled together

in the right side of the heart: but

there is more in the blood here than

we have yet considered; there is

Carbonic Acid gas, which the blood

was taken from the tissues as effete matter occasioned by waste, and has supplied its place with Oxygen. this must be eliminated which is done in this manner. the heart contracts upon its contents and forces the blood into the Pulmonary Artery, which proceeding to the lungs ramifies into minute branches over its whole surface, forming a net work in order to expose a greater quantity to the influence of Atmospheric Air. which is brought into the Air cells of the lungs by Inspiration. this

this thin membrane the blood gives off its Carbonic Acid which is immediately Expelled by Expiration. and receives the Oxygen which returns with Inspiration, the Red Corpuscles seizes with avidity upon the Oxygen, changes to a bright red, passes into the Pulmonary veins to be conveyed to the left side of the heart — in the left side of the heart then we have the blood that is to nourish the system, to supply the waste, and build up the tissues; it is still distant from its

field of operation, but by a forcible contraction of the heart it is sent through the Aorta to be distributed by the arterial system to the various portions of the body — a glad gushing stream that leaps along as if conscious of its errand of mercy to the needy, sinking organism; the Aorta as if in sympathy gives it a "God speed you": it is in the capillaries that it is needed — the famine is there — to the capillaries then it goes; here it moves more slowly — The

Enthusiastic rapidity of about one foot
per minute with which it started
has sobered down until now it moves
only about one inch per minute, but
the work is none the less earnest as
it Eddies round through the capillary
vessels each tissue is apportioned off
its modicum of food, and is relieved
of its effete material; this is done not
by bringing each anatomical Element
into direct contact with the blood,
but through a thin, porous, homogeneous
membrane (as is the air in the lungs)

of the thickness of from 1/12500 to 1/25000
part of an inch — its purpose being,
effected it returns bearing away with
it the waste — going through the veins
radicals into the veins it is conveyed
back to the right side of the heart:
it meets on its way with fresh sup-
plies of nutriment taken up it
carried through the lungs gives up
its Carbonic Acid, becomes Oxygenated
returns to the left side of the heart —
and starts again upon its missionary
tour. We might take into consideration

the wonderful manner in which all these apparatus are constructed. Their beautiful adaptability of means to an End, Each apparatus or even part of an apparatus forming a Study that Excites our admiration and our wonder, and pointing, out undeniably a Supreme Architect, but when we consider them all, our wonder and our admiration increase, that so many Complex apparatus should work so harmoniously to gather: we think with Watts

"Strange that a harp with thousand strings
Should keep in tune so long

but this is not here demanded.

I have seen somewhere a beautiful illustration of the manner in which the body is nourished. The body is compared to a city intersected with a vast net work of canals (as Venice or Amsterdam) These canals are loaded with barges, which carry to each house the most vegetables and groceries needed for daily use; and while the food is thus presented at each man's door, the canal receives the drainage of all the houses. One house will take that food

which it needs probably meat, another only vegetables &c &c; in like manner from the blood does one portion of the body, as the muscles, demand one sort of nutriment — the nerves another — the bones a third, and so on — allowing these substances it does not need to pass to their neighbors, with whom (in a state of health) they are on very good terms. An astonishingly vast quantity of nutritive material is carried by the blood in the course of one year, being not less

than 1/2 Jour — and the same amount is eliminated. It carries gases, salts, metals, fatty matters etc — when the system appropriates more than it wastes, Plethora supervenes; when it has been furnished and appropriated than is required, or than Emaciation. This would lead us to consider that very important subject to the Medical Practitioner viz Alimentation in disease, until within a very recent period, much misapprehension has existed on this point and the suffering, patient, weak, from

impaired nutrition has been blood was
starved, when alimentation to form
nutritive, normal blood was needed,
aided by a course of persistent depletion
the vexed and harassed vitality has
fled. The results of withholding
food which is to form the blood, and
the actual withdrawal of blood from
the body, are the same so far as the
organism is concerned. I do not
wish to paint as a "sanguinary
villain" Every practitioner who
draws blood under any circumstances

but there are, even nowadays, numbers who holding to the traditions of the past advocate the use of the Cancer with a Knife. The latest views founded upon sound scientific Physiological Principles forbid us using the Caustic rules for hydraulic physical purposes: these same sound doctrines imperatively command us to replace the Nasty mixtures formerly administered to the sick, by nutritive Sustenance: when this practice was commenced many are

the Sweep, the ominous shaking of the head, & the prognostications of evil to result, causing the practitioner of the new School to feel the "ire" that "besides the hand, that plucks the beard of hoary-headed error"; but do manifest more the good results that is obtained, and suffering humanity has cause to congratulate itself that it has.

The avowed maxim of the medical man" to assist "Nature" is best accomplished by rendering Nature

able to assist herself, and oft times in diseases Nature sustained is able to eliminate the noxious hurtful influence, the much honored "Vis Medicatrix Naturae" is only the ideal expression of the digestion of the eliminating organs.

Of course I do not mean to offer to the already enfeebled Stomach those substances which it is easy to reject, but I mean by the repeated administration of small quantities of nutritious and palatable

food to support the vital strength that is taxed so hardly in this strife with disease. And what those substances are that are particularly demanded may often be arrived at by consulting the patient taste, for it is with this as Goethe says of the impulse. "I do not readily blame any harmless impulse which the kind mother, Nature, has given to man; for often the ends which the understanding and reason are unable to arrive at, is attained

by a happy instinct or inclination
irresistably leading us". We define
hunger to be a systemic want with
a local declaration in the Stomach
may not the system tell us by the
appetite not only that we have need
of food, but also what sort of
food we need; this though with
caution as disease may induce
depraved appetite.

The profession throughout Christendom
is now learning to appreciate the
importance of food in the treatment

of disease; to the Novice in medicine it is a matter of surprise and astonishment that so common sense, so plain a truth should ever have been overlooked by the bright intelligences that have adorned our profession; and the new light that has dawned upon us, and has so benefitted the world, is reflected in characters of living light from the gravestone of Dr Graves, of Dublin "He fed fevers".

AN

Inaugural Dissertation

ON

The Differential Diagnosis of Typhus and Typhoid Fever.

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

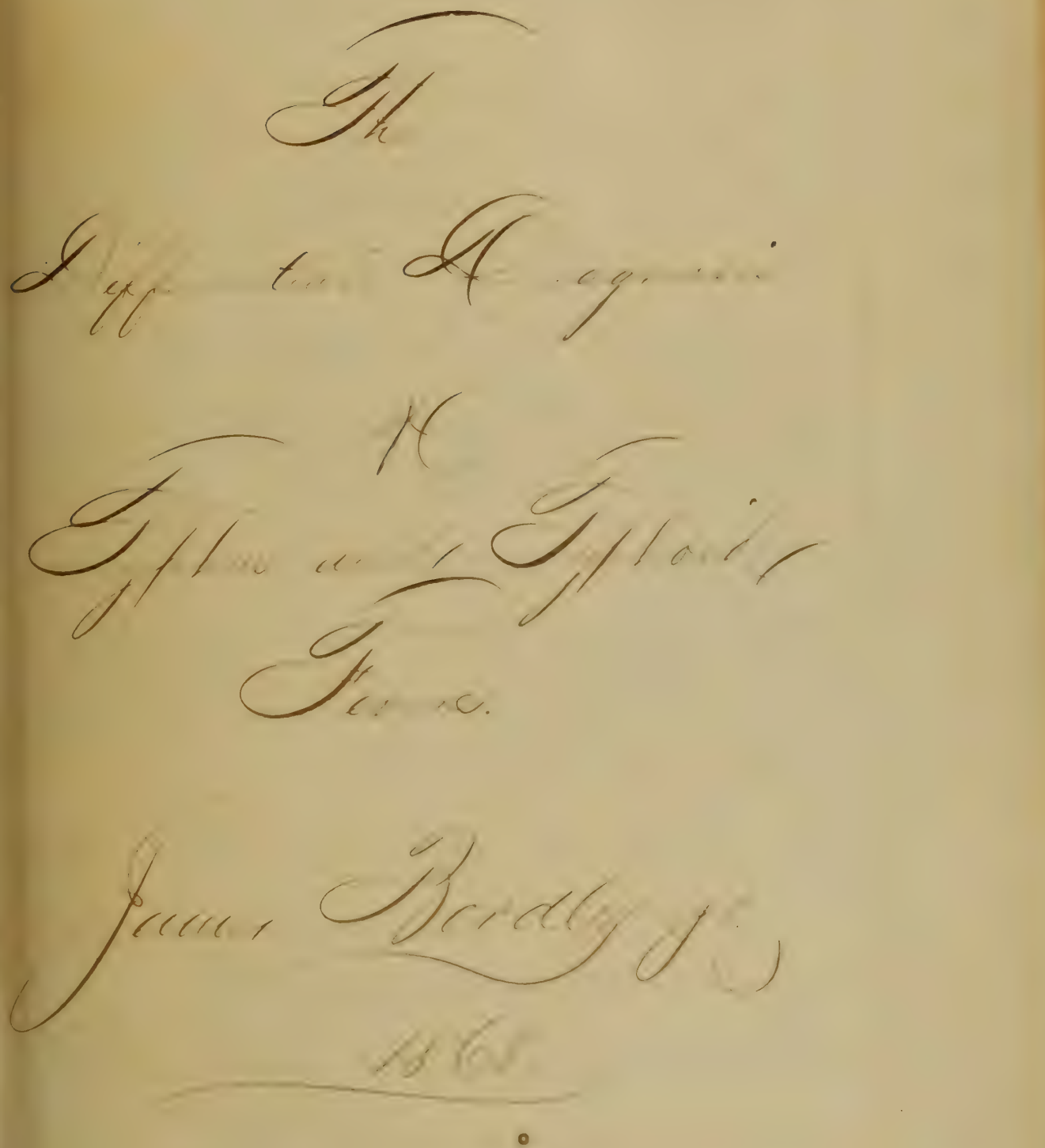
By

James Bordley, Jr.

of

Queen Anne's County, Maryland

Session of *1867* 1868.



The Differential Diagnosis of Typhus and Typhoid Fevers.

Correct diagnosis is the foundation of all accurate knowledge in the successful treatment of disease. By it alone medical science has made such rapid advancement, and has been able to illuminate remedial the hitherto darkened path of therapeutics.

Physiology and pathology have opened new realms of

the dense morasses of ignorance which, up to a short time past, stood as immorable obstacles in the pathway of progressive medical literature.

Theory after theory has been advanced, speculations have been indulged in, and experiments have tried — theories have been exploded, speculations have found an ethereal ending and experiments have proven the fallacy of the principles which proposed them, nevertheless, they have not been altogether in vain, for the great and noble minds, and indefatigable ...

ergies of the profession have sun
grains of genuine gold - in all the
dross and glitter and have found
bright gems amidst these gloomy
dark surroundings, which, being
linked and welded together have
at last begun a chain of more
than mere hypotheses.

The term diagnosis implies
"the discrimination - of a disease
by means of distinctive marks or
characteristics," that is, the act of
fixing the nature and seat of a
disease by known symptoms and
signs

It is sufficiently obvious

to all that will not the proper discrimination of disease, accurate therapeutics, or curative knowledge is impossible.

Diagnosis and treatment are, in fact, the two practical ends of the study of medicine. The clinical history of disease is in a great measure dependent upon it, and diseases which have hitherto been confounded are now clearly and readily distinguished.

The eruptive fevers were once regarded as only different varieties of the same disease; and, still more recently,

Typhus and Typhoid have been confounded, and, by some are still looked upon as the same.

Difference in skill and tact among practitioners of medicine relates especially to diagnosis. In medical consultations it is chiefly due to this that differences of opinion arise.

In discriminating a disease from one of several with which it has more or less symptomatic phenomena in common, the amount of positive evidence in behalf of its existence is to be considered as well as the evi-

dence against the existence of the disease or diseases from which it is to be discriminated.

This comparison of our disease with others, with reference to the positive and negative evidence of its existence, constitutes what is called "differential diagnosis." Thus Typhus and Typhoid fevers have many symptoms in common, but differ from each other in essential points — the most important of which I shall now proceed to enumerate. For want of time and space I will have to omit those

which are not of the greatest moment and from lack of experience I can only give them a general and cursory glance as deduced from the writings of our best authors, necessarily I will dwell only on such as form the true basis of the differential diagnosis.

It is not my intention to discuss the etiology and pathology of fever, it must suffice for the present to say that no positive or accurate knowledge of its cause or pathology has yet been deduced; and it

remains for future investigation and research to elucidate a subject which will add another link to the grand chain of medical literature, and render immortal the name of him who shall be first to give to an anxious world the long sought for truth. —

The name "Typhoid" signifies "Typhus-like". Some have suggested that it should be called enteric fever," maintaining that this name better conveys the true character and seat of the disease.

The anatomical characters of Typhoid fever are highly interesting

and important consisting of certain special lesions seated in the "Peyer-ian," or agminated, and solitary glands of the small intestines and in the mesenteric glands.

The first ascertained step in a series of changes occurring in the patches of "Peyer" and solitary glands is enlargement, due to the deposit of a morbid product known as typhous material.

The deposit first occurs in the patches nearest the cæcum and successively in those situated above.

[illegible]

to precede the deposit but the

has not been definitely proven. The patches are usually incurvated to the touch, they are sometimes smooth and sometimes present an irregular granulated aspect. Sloughing away of the deposit in the glandular bodies and mucous membrane is the next step. In consequence of the sloughing ulceration ensues. The Peyerian patches after sloughing is completed, are the seat of ulcers.

The occurrence successively of ulceration in the patches from below upwards is one of the distinctive features of the disease

Cicatrization is the last step in the series of processes.

Perforation of the intestine is liable to occur in one or more of the patches, followed by symptoms of acute peritonitis, being occasioned by the escape of the intestinal contents into the peritoneal sac.

The solitary glands are also subject to the same changes that have been described as taking place in the "Peyerian" patches; more or less enlargement of the mesenteric glands is always associated with the intestinal lesions dependent upon the same deposit which is

present in the enlargement of the "Peyerian" and solitary glands.

"The foregoing lesions are peculiar to Typhoid fever; in greater or less degree they are always present and they occur in no other disease; they are characteristic of Typhoid fever as the eruption of small pox is characteristic of that disease. They do not constitute the disease more than the eruption constitutes small pox, but they sustain to the disease a definite fixed pathological relation, the nature of which is unknown."

As regards the nervous system

more or less cerebral congestion is not uncommon together with serous effusion in the arachnoid cavity, lateral ventricles and sub-arachnoid space. These latter lesions are found also in Typhus fever but much less frequently than in Typhoid. It seems to me that the peculiarities of the latter disease already pointed out are of themselves sufficient to prove the "non-identity" of the two fevers. Though it is still held by some that the same lesions are present in both.

Dr. Joseph Bell Physician to the Glasgow Royal Infirmary says

"Taking into consideration the results of my own observations in fever, I am forced to the conclusion that disease of the mucous membrane of the small intestine constitutes the anatomical lesion in Typhus as well as in Typhoid fever; consequently the two diseases are identical in their essential pathological lesion."

To Dr. Bell has the accurate observations of so many and equally great minds opposed to him, that we are forced to think him in error, although he quotes from men of high standing in

substantiate his theory.

The differences in the two diseases as pointed out by the best authorities are almost as numerous as the symptoms of each, and to go regularly through them, giving each a full description would consume more time and space than I could bestow upon the subject but giving them a careful, though hasty glance will suffice to prove their non-identity.

We find that they differ

1st In the age of the patient they affect.

Typhoid is greatly [illegible]

by age; young persons being chiefly liable to it, and those over fifty years of age are seldom affected by it. Typhus, on the contrary, attacks for the most part persons past the adult age though all are liable to it and until Typhoid does not spare those past the fiftieth year.

2nd In their modes of attack Typhoid fever as a rule is developed gradually. In a large majority of cases the patients are unable to fix the precise date of their ailment, so imperceptible is the commencement of this

disease.

Typhus, on the other hand, has a shorter period of incubation the patient in a great majority of cases taking to the bed on the second or third day after the first manifestations of illness. The symptoms though during the development of the disease are essentially the same with the important difference, viz. the abdominal symptoms of Typhoid fever diarrhoea, meteorism, [illegible] and gurgling are generally wanting.

3d. In these durations.

The career of Typhoid fever [illegible]

[illegible] the [illegible]

convalescence like the development is gradual; while the duration of T plus is much shorter than that of Typhoid [illegible]

4th The eruption also differs in many respects.

Typhoid eruption consists of isolated papules, generally limited to the trunk of a rose or pink color, they are slightly elevated (therefore [illegible] not macular) their number is generally small not exceeding twenty in the majority of cases. They will disappear upon pressure and return again. Fresh papules appear from

time to time taking the place of those of anterior date; they are usually found over the chest, abdomen and back; they make their first appearance between the seventh and fourteenth days reckoning from the beginning of the forming stage.

A characteristic eruption occurs in a larger proportion of cases in Typhus than in Typhoid fever.

It appears also earlier the average period, dating from the time of the patient's taking to the bed, being somewhat under three days. It is also more abundant, frequently being copious over the extremities as

well as the trunk.

Other distinctive points are as follows. It is a maculated not a papular eruption, the spots become of a dull, dingy or dark red hue, and after the first few days the waves cannot be made to disappear by pressure, the spots are smaller than the Typhoid eruption, they do not come and go like the others, but appear about the third day and remain through the disease. The copiousness of the eruption represents generally a corresponding gravity of disease. This does not hold good with regard to the eruption of Typ

fever.

5th They differ also in the color of the skin, in the expression of the face and in the manner.

Typhus patients often present in its highest degree, those characters termed oppression and prostration by the old writers, the face is dark and usually flushed, the complexion muddy, the manner stupid and confused and the eyes unintelligent.

On the contrary, in Typhoids fever the complexion does not become muddy except in a very slight degree, consequently the flush

of the cheeks, when present, is bright and pinkish and not darkened, it is often circumscribed to the cheeks, and is then strongly contrasted with the surrounding pale skin. The manner is also often natural, or even a little sharp, provided there be no delirium.

6th They differ in the severity and course of the head symptoms.

Headache is an almost constant symptom in both, yet in each it has a determined duration. In Typhus it ceases usually on the tenth day, and always before the fourteenth; in Typhoid fever about

four or six days later and may last until nearly the end of third week. [illegible] in Typhus than in Typhoid [illegible] several days. Somnolence, although frequently absent in both, is more common in Typhus. Coma vigil occurs in some cases of Typhus but [illegible] Typhoid fever.

7th. A degree of loss of [illegible] [illegible]

Typhus [illegible] [illegible] always [illegible] to the bed, and are more completely prostrated at an earlier date than in Typhoid cases.

8th In the frequency of Epistaxis
Which is rare in Typhus and com-
mon in Typhoid fever

9th In the condition of the eyes
Dr. [illegible] observed that in many
cases in Typhoid the pupils were di-
lated and in Typhus it was con-
tracted

10th In the condition of the tongue.
In Typhus the tongue [illegible] fre-
quently becomes covered with a thick
black or brown coating, [illegible] less
frequently [illegible] glazed and
fissured, and is oftener with difficulty
protruded than in Typhoid fever

11th In the chest symptoms

Decrease of the depending part of the lungs, owing to hypostatic congestion is common in Typhus rare in Typhoid.

12th In the state of the pulse

The average frequency of the pulse is greater in Typhus than in Typhoid more variable in the latter

13th In the abdominal symptoms

As regards the abdominal symptoms which are highly diagnostic of Typhoid fever, the two diseases present striking points of contrast, besides all that I have [illegible] on the head of anatomical lesions we find diarrhoea is often absent

Typhus and when present invariably (except a few cases) slight; the stools have not the ochre color of those of Typhoid fever. Tympanites is oftener wanting and, when present, is generally slight in Typhus fever; iliac tenderness is also less; intestinal perforation never occurs in Typhus, while hemorrhage from the bowels is one of the rarest of events, exclusive of cases in which dysentery is a complication.

14th In the greater softness and flabbiness of the muscular structure of the heart in Typhus than in Typhoid fever.

15th. In the frequency of lobular and lobar pneumonia. Typhoid fever being oftener subject to such complications.

16th. In the frequency of ulcerated mucous membranes. Which are often seen in Typhoid but rarely in Typhus fever.

17th. In the greater frequency of pleurisy in Typhoid.

18th. "Certain laws with respect to causation go to show their non identity.

Typhus is diffused [illegible] pally by contagion while Typhoid is rarely [illegible]

phoid fever is indigenous to many regions where Typhus is very rarely, if ever, generated. Typhus prevails as an epidemic, but Typhoid is usually an endemic disease."

19th In mortality.

Typhus is more fatal, irrespective of complications than Typhoid fever.

20th In the continuance of the eruption after death.

The spots of Typhus last unobliterably after death, whereas the rose spots of Typhoid fever cannot be found.

"In addition to the difference already given, there is some [illegible]

of different constitutions of the blood, but, as I have no exact data I pass them over.

Although many of the distinctions appear of little value in a practical point of view, there again show indications too weighty to be passed unnoticed by the most careless observer.

Thus among symptoms the absolute diversity of the eruptions and state of the skin, the difference in the duration of the diseases, in the mode of onset and the pronounced abdominal symptoms of one with the absence of these

in the other, not very marked. So also the post mortem lesions the entero-mesenteric disease of Typhoid contrast strongly with the absence of pronounced local changes in Typhus fever.

The fact that fever of one sort always gives rise to a similar disease, and to no other lends signal aid in substantiating the above truths, especially when we can call in the highest authorities to bear witness to the correctness of the assertion.

"That the differences between the two fevers do not depend upon

any variety of epidemic constitutions present in one year and not in another is proven by the length of time over which observations run."

When to all this positive evidence is added the fact that Heyhaus and Pringle who were so familiar with fevers, distinguished two forms, [illegible] them Armstrong & [illegible] have corroborated the fact, the correctness of the view is almost beyond the [illegible] of controversy."

When we admit the different forms of fever the discrepancies of authors of different [illegible] and [illegible] disappear [illegible] is given to [illegible]

perplexity and light is shed around its hitherto obscure and doubtful outline. Through the curtain of obscurity I think we can almost foresee the day when even the most tenacious adherents of the opposition will see the error of their way, acknowledge their wrong and embracing the true faith blend harmoniously with the true and well founded observations of Jesus and others.—

I should be false to my own feelings and heedless of the demands of Justice & gratitude if I should fail to add my grateful acknowledgement of the very many great and

lasting obligations I am under to the Faculty of the University of Maryland severally and as a body. I am and have been constantly the recipient of many and uniform kindnesses, and the object of the untiring care and patient endeavors which have characterised the learned lectures of the past two years. For all of this I feel that there is but little return that I can make but if the earnest promise of a persevering attention to professional duties and studies and a firm and faithful adherence to moral rectitude can in any measure [illegible]

to advance my claim to the honorable degree of Doctor of Medicine or help to remove the fear of having bestowed honors upon an unworthy and unappreciative applicant. I here most earnestly and unreservedly pledge myself to its fulfillment.

Before bidding adieu finally cannot refrain from again tendering my most heartfelt and grateful thanks to the Faculty, and I am only too proud to assure each member thereof that as long as memory shall hold her accustomed realm in my being I shall recall his name with warm regard, and will ever

revert with unfeigned pleasure to the time I have spent, the able and lucid lectures I have heard, and the pleasantly profitable intercourse we have had during the past two years.

Baltimore February 1868.

AN

Inaugural Dissertation

ON

Acute Lobar Pneumonitis

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

Pembroke A. Thomson

Of

Jefferson County, Va.

Session of *1867 & 68*

An

Inaugural Dissertation

on

Acute Lobar Pneumonitis

Thesis

Acute Lobar Pneumonitis

Having had no personal experience of any description, in any disease, whatever, from the almost endless number treated of in books, as my subject; simply because it is common in almost every country, & therefore requiring the practicians attention of every medical Student; or to say the least is a topic with which he should be well acquainted, & a disease which he should thoroughly understand, because we must bear in mind, that of late years, there has been a complete revolution in the treatment of this disease, as in all inflammatory affections, formerly bleeding & calomel, was almost the universal way of treating these diseases, how stimulating measures are resorted to, & bleeding is comparatively rare, Calomel also has lost many of it supposed specific virtues; But I am aware, that many medical men of destinction have gone to extremes on this subject, & the

only course left to a Student, is to strike the medium, & leave the settlement of such a question to time & experience.

The derivation of acute Pneumonitis. is inflammation seated in the parenchyma of the Lungs, which includes air cells & terminal branches of Bronchial tubes, the lining membrane of these, differs from that of the Bronchial tubes, & are distinguished by their tenuity, & absence of mucus follicles. Lobules are composed of these little cells & Bronchioles, & these lobules, connected by Areola tissue compose the tubes, & a collection of these the Lungs.

The limitation of the disease to the pulmonary substance, is owing to the difference in the membrane: which is in accordance with the law of determination of inflammation, that it is propagated more readily where membranes are of the same kind & vice versa.

Anatomical Characters. The first appreciable change, is an abnormal accumulation

of blood, or hyperaemia due to active engorgement, the lung will weigh more than a healthy one. Though the air at an early stage may be still in the vesicles, this stage is of short duration, exudation or coagulation soon follow. the exuded matter escaping into the air cells, fills & distends them. they cease to contain air, & consequently the lung becomes solidified. it is now pale, softened, more friable, & much increased in weight, a single lobe often increasing from one to two pounds. the weight is due to the solid matter withdrawn from the blood, & a test of its solidification is the sinking in water. the exuded matter is absorbed when removed, & may be effected with great facility, when absorption takes place the lung returns to its normal state. Such is a favorable termination, but should this not take place, there will be suppuration, & the lobe will be infiltrated with pus, the color is now gray, & substance is very soft; occasionally abscesses form, but

gangrene is very rare. Pleurisis is often developed coincidently with this disease, & varies much in point of severity; but there is seldom much liquid effusion, it is generally circumscribed in character. Pleuropneumonia expresses the existence of the two. There is more or less of Bronchitis; but this is not invariable. it does not tend to the development of Pneumonitis as a primary affection, & the latter only to Bronchitis in the diseased lobe. Pneumonitis in the majority of cases attacks the lower lobe, & the one on the right side, oftener than the left; when it attacks an upper lobe the disease is most severe; as a general rule, it rarely attacks two lobes simultaneously. & When a new lobe is affected, is the seat of a new invasion. it does not extend from one lobe to the other. A whole lobe is generally Diseased, but the inflammation begins at a certain point, & extends from lobule to lobule until the entire lobe is involved.

diffusion of the inflammation may only take a few hours, & then again may occupy several days, can determine the progress of Solidification from day to day by Physical Signs: the inflammation rarely ends with engorgement; Solidification must always taking place

Clinical History. There are three Stages. the first is that of active Congestion, the Second Solidification. the third embraces one of two conditions, which depends on the favorable or unfavorable condition the disease may be pursuing. if favorable it is evident that absorption is going on, & convalescence will take place, & finally ends in Resolution if unfavorable we have the Suppurating Stage. the duration of these Stages vary much, the first only occupying a few hours, Second two or three days, average time being forty eight hours. Resolution is still more variable & seldom completed in less than four days & generally eight or ten is required. if the Purulent Stage death usually takes place

within a few days, but if Patient end in recovery, weeks elapse before the normal condition is restored. Acute Lobar Pneumonitis commences with a chill, & is frequently accompanied by rigors. The invasion is usually abrupt, & generally takes place during the night, about this time we have the pain, which is often severe acute & lancinating, & identical with the pain of acute Pleuritis & proceeds generally from the conjunction of the two diseases & generally the intensity of the pain is proportional to amount of Pleuritis. The limitation of pain to the nipple is distinctive of Pneumonitis. Cough is sometimes wanting, but is usually present. The cough is often accompanied by Expectoration characteristic of the disease, it is at first scanty transparent & viscid, afterwards becoming semitransparent, adherent & of a reddish color, & is the rusty Expectoration due to blood. So adherent that it may be inverted without falling out, or losing its position

this expectoration is by no means always present, having its adherency, & semitransparency, without the red tint, & is sometimes of a yellow color. Febrile Symptoms, pain in head, occur there is Anorexia. thirst, prostration, & heat of skin &c. pulse full. hard & beats from 90 to 120 By placing the Thermometer in Axilla. we note the rise & fall of temperature. when above 104° the disease is very severe. a sudden increase of temperature, denotes the invasion of a new lobe, & the amount of constitutional disturbance will vary in different persons. respirations are increased in frequency. During the Stage of Solidification. these Symptoms undergo some changes. the pain will cease or be diminished, cough & expectoration continue, the former milder, & of easier type, latter effected with more facility becoming more abundant opaque, & less adherent, & is resolving Bronchitis. being furnished chiefly by Bronchial tubes in effected portion of the lungs. febrile movement is diminished in severity, & respirations increased in frequency. Chill rarely accompanies invasion of a second lobe

The invasion of an entire lung dont always give symptoms denoting great severity of disease the fever may not be intense, respiration but little increased, & expectoration may be wanting & system but little disturbed. During the stage of resolution there is progressive improvement until patient recovers Should it terminate in suppurating stage Pulse will be more frequent Expectoration abundant & purulent. Respiration frequent, Strength of patient fails & death takes place by asthenia after solidification the chlorides of urine are reduced it is not peculiar however to this disease but does denote the stage. Delirium sometimes occurs & may be slight, or prominent; when occurring it signifies gravity of the disease, jaundice is sometimes noticed. Abscesses & Gangrene may also occur. Pneumonitis in intemperate persons is apt to develope Delirium Tremens. Typhoid Pneumonitis is a low stage & must be distinguished from Typhoid fever with Pneumonitis. Average duration of uncomplicated pneumonitis is twelve days.

Pathological characters. The inflammation affects a mucous tissue, but this differs materially from the membrane lining the Bronchial tubes, both as respects its anatomical composition & function. So that the inflammation is characterized by an exudation which will not produce new tissue, & is not exfoliated or ejected, differing from exudation of lymph on other mucous surfaces, it is removed by absorption. The exudation is a product of the blood circulating in the branches of the Pulmonary Artery.

Causes of the Disease. No age is exempt from it particularly susceptible to the disease, occurring frequently at five years of age, & but rarely beyond sixty, attacking males, oftener than females. No particular calling predisposes to the disease, those are oftener attacked, who are the most exposed to vicissitudes of temperature. Frequently an attack is fairly attributable to cold & wet, sleeping on damp ground &c. Intemperance is a cause, but it is not certain whether it is the abuse or the exposure to which drunkards generally subject themselves. Certain diseases of the

year seems to favor its development, occurring much oftner during winter, than Summer, in Northern States more cases occur in the Spring, in New Orleans more in the winter. the disease is more prevalent in the middle & Southern States than north. more prevalent some years than others, affecting especially the negro population. Disease is Severer in warm climates, & in the large proportion is referable to no obvious causative influence. Dr. Donalson thinks it a miasmatic poison developed from the Soil. it may be produced Transmissibly

Diagnosis. Should a person be taken with a chill followed by febrile symptoms, & pleuritic Stitch referred to the hypochr, together with characteristic rusty expectoration, the diagnosis is easy & determined without the physical Signs, but such characteristic Symptoms, are by no means invariable; are often hidden, & the disease itself overlooked by those who do not employ physical Signs, with aid of these Signs the disease can be diagnosed with certainty, & without difficulty. Signs in

first Stage of the Disease, is slight dulness on percussion, & crepitant rale, which when well marked is almost Pathognomonic, & must be careful to distinguish this rale, from sub crepitant, its destinctive character being its fineness, dryness & limitation to inspiration. the Subcrepitant on the other hand however fine it may be, is a moist bubbling sound & liable to be heard in expiration as also in inspiration. the two may exist at the same time. the crepitant rale is not uniformly present, a positive diagnosis is impossible in event of this, you will have to wait until enough tubules are solidified to give the rale, or an appreciable modification of respiratory murmur. Bronchophony, & Whispering bronchophony are signs denoting this condition of solidification. manifested at first over a part & then over the whole of affected lobe, spreading with rapidity, or slowness according to the form of disease. Second Stage may be determined by these Signs.. generally they are all present, & it is exceedingly rare for

all to be absent, dulness on percussion amounts almost to flatness, extending over the space occupied by the solidified lung, boundry line being the interlobular fissure. Crepitant rale may continue more or less diminished in this stage, or disappear upon solidification invasion of second or third lobe is noted by dulness on percussion & usual Auscultatory signs viz. Bronchial respiration, Bronchovessicula respiration, heard near the apex of lung. Broncophany with a loud & whispered voice, solidification of upper lobe is sometimes flat, at others tympanitic, on percussion, & sometimes an Amphoric intonation. Resolution & its progress from day to day is noted by modification of signs denoting solidification, approaching closer the vessicular murmur, Broncophany is lost, dulness less & less marked, but continues after exudation has been removed, the subcrepitant rale is frequently heard, sometimes the crepitant Redux suppurating stage, Dulness continues, moist Bronchial rales are prominent, marks of solidification

from auscultation. continues, if abscesses be present will have the consecutive respiration.
Prognosis. This will depend upon the extent of lung involved, & the disease with which it may be connected, as an intercurrent affection; its complications, & previous condition of Patient. If it be a primary disease, limited to a lower lobe, uncomplicated & the person of good constitution, its tendency is to recovery. The gravity is not so much in the disease per se, as from coexisting affections. In organic diseases of the heart, it is likely to prove a serious affection. Complications which are apt to render it fatal are Pericarditis, Intermittent Fever, & Delirium Tremens. But recovery takes place in a certain proportion, notwithstanding these complications. Coagulation of fibrin in right cavity of heart is frequently fatal, apt to occur when a whole lung is diseased. Gangrene, abscesses, & suppurating stage all render the prognosis extremely unfavorable. Unfavorable prognostic symptoms. Frequency & feebleness of

pulse, great frequency & labor of respiration, lividity of face, an abundant muco purulent expectoration, Active Delerium, Typhoid State of Delerium with Subsultus Tendinum, in the great majority of cases death takes place from asthenia, combined with Apnoea, patients generally die from exhaustion, when convalescence takes place it generally progresses until recovery is complete.

Treatment. This will involve each Stage of the disease Separately, it is exceedingly questionable whether we can arrest this disease in the first Stage. Measures considered as abortive for this, are Bloodletting, Cathartics, & other Anti phlogistic remedies, but such remedies require a great deal of tact & judgement, for should the Pat will actually do harm. The object then in this Stage will be to relieve the intensity of the inflammation, & place the System in a condition to tolerate the disease. Bloodletting is admissible as a palliative, & to some degree a curative remedy, in view of the pneumo-

of its action, high fever increased action of heart & Plethora will warrant its employment, & vice versa. when fever is not marked, pulse active without power, & patient Anemic, such treatment is contra indicated, but we may deplete with Saline Cathartics, & Sedative remedies, after the administration of a Saline purgative, if skin continue hot, pulse frequent, Tartar Emetic or some Antimonial preparation may be given, but dont carry the dose to distressing Nausea. Veratrum viride may be given under the same restriction. these remedies would be contra indicated in case of feebleness, use Opium during the first Stage in doses to relieve pain, blisters would be injudicious, Stimulating liniments may be employed, Sinapes to the Chest, but in general terms, a brisk Saline Cathartic followed by a dose of Opium will be generally sufficient for this Stage.

Second Stage. The indications here will be to promote resolution, palliate the Symptoms, & support the powers of the System

Bloodletting in this stage is not admissible, & saline purgatives are uncalled for, it is not an object now to divert the blood from the solidified lung, for exudation has already deprived it of blood. the object then is to absorb this exuded matter, for which purpose Tartar Emetic has been given, but Professor Flint has discarded its use for this purpose, & says he sees no reason to regret having done so. Treats mercury in exactly the same way. Iodine may be employed, because it is not open to the objection of either of the above remedies, in the sense that it will do no harm if it does no good, apply the tincture of Iodine to the affected side. oiled muslin is of great advantage. Opium is indicated in pain & restlessness, does not hasten administration it, and alleviates a great deal of pain, but should mucus be accumulated in the bronchial tubes, its use must be contra indicated, when there is fever, may give Tartar Emetic, & benzoin inside. The leading indication is to support the system & should not be

lost sight of, for the great danger in Pneumonitis, is failure of the vital powers, before resolution can take place, & the indication for supporting measures will be urgent in proportion to the danger from Asthenia, but these measures must not be deferred too long, would be a mistake to wait until life was almost extinct. We would give Tonics, Stimulants, & Nourishing diet, Quinia is the best of Tonics. a feeble vibrating & compressible pulse, is an indication for supporting measures. Animal Soups, essences, milk, & farinaceous substances. may generally consult the desires of patient. When this disease is combined with Intermittent fever, Quinia is the true remedy, when with Delirium Tremens. Opium must be given. Gangrene calls for supporting treatment. When convalescence begins, need not be too cautious, as a relapse seldom occurs. Ammonia may be used to prevent the deposition of fibrin, in the heart, There is no danger in this remedy, & it is supposed that ammo

holds the fibrin of the blood in solution hence its use.

Pembroke A. Thomson.

AN

Inaugural Dissertation

ON

The Use of Alcohol in Illness

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

J. Clayton Williams

of

Winchester Virginia

Session of 1867-68

The Use of Alcohol in Phthisis

Of all the diseases to which man is liable, there is none which is of more interest to every medical man than that known as Phthisis Pulmonalis. The terrible fatality of this disease and the number in all classes that fall

its victims, has well entitled
it, to the more common,
but most significant name
Consumption.

Hereditary, as I believe it to be, Dr Budd to the contrary notwithstanding, it is often the only heir-loom that is handed down from one generation to another, until by its ravages whole families are carried off, and names

once well known in our midst are blotted out, save where the monuments of the dead preserve the record. For many years the profession has been endeavouring to discover something to stay steps of this great destroyer, and much study and thought has been bestowed upon it but unfortunately little success has rewarded the

effort. From time to time remedies have been brought forth and vaunted as specifics, but soon lost their reputation and were laid aside, as the disease continued unchecked on its march of destruction.

Although failure has so far attended all efforts to find a specific, yet much has been accomplished by scientific research and

we may hope for still farther progress. — The means now employed to improve the general condition of Consumptives, is of great advantage, by placing nature on a vantage ground in her struggle with the disease. The enumeration and study of all the remedies and rules of hygiene that have proved most beneficial, is not my present

purpose; but a consideration of that agent which is of so great utility, Alcohol.

Before taking up the therapeutical effects of this agent, I would first notice its most conspicuous physiological actions.

When Alcohol, in any of its forms is taken into the stomach, there is felt a sensation of warmth, extending gradually from thence over

the rest of the body. an in-
creased force is given to the
hearts action: the digestive
powers are promoted. and
all the organic functions
exalted. The different com-
pounds have somewhat diffe-
rent actions, but all agree in
the essential one of stimulation.
It's first effect is upon the
mucous membrane of the stom-
ach. but from the ease.
with which it is absorbed

it is soon taken up and carried by the circulation to all parts of the body, receiving the stimulant power upon the tissues with which it is brought in contact. The special tendency seems to be to the brain and nervous centres shown by the presence of more or less pure alcohol in the fluids of the brain and cord, and by the increase of muscular

[illegible]

and exaltation that I have mentioned, follows upon the administration of strictly stimulant quantities. When given in larger amount, we see the exhibition of the narcotic power possessed by this agent. The ideas become confused self control is lost. Latent feelings are shown want of coordinating power is felt. followed by stupor and sleep, and sometimes by

coma and death. This last result seldom follows local poisoning, but occurs after an indulgence more or less prolonged." The above, are the effects, apparent to all, of alcohol upon the system; but as to the intimate changes brought about in the tissues, there is much difference of opinion amongst the authorities of the day. Some teach that it diminishes

the integral change in the tissue and thereby prevents the waste, attendant upon such change: whilst on the other hand it is held that the increased activity of the functions must be accompanied, by a more rapid disintegration and renewal of structure. This difference of opinion can only be definitely settled by repeated experiments accurately made.

Another point of controversy is whether or not Alcohol is food. Here again, so much ingenious reasoning has been put forth, in support of each side of the question, that one who has only the experiments and assertions of others to guide him, is somewhat perplexed. Fortunately, these differences of opinion, do not interfere with the practical benefits to be derived from the

use of this legend, and need only serve to impress caution in its use. Those who hold that alcohol is food prefer base their opinion upon the following facts. In the first place: oft repeated experiments have shown that labouring men, when furnished with a due amount of alcoholic liquor, can do the same amount of work

with much less food, than when no such drink is allowed. and that this difference is too great, to be accounted for, merely by the improved digestion of the ordinary articles of food. The next fact brought forward is, that so small is the amount given off unchanged, in proportion to that taken into the stomach, that most

if it must be decomposed in the body, and then converted, by some process as yet unknown, into one or several of the normal constituents of the economy. The increase of adipose tissue, and the greater amount of fat present in the blood, whilst bleeding is being used, seem to favour this view. But the strongest argument on this side is

furnished, by the remarkable cases on record, of persons living for years almost exclusively upon some one of the forms of alcohol.

Whatever the theory may be, the facts remain, that either directly or indirectly, alcohol does enable the system to do with little or no ordinary food, for a considerable period, ranging from months to years.

I shall here leave this disputed point, and proceed with the more special subject of this Thesis.

In Phthisis the main object aimed at, is the nutrition of the patient and every effort is made to accomplish it. Food is of course the main reliance, but it is often difficult, from the lack of appetite, to get the due amount

the proper secretion is aug-
mented and the muscular
walls invigorated.
This stimulating action ex-
tends to the intestines and
thus continues to aid in the
digestion and absorption
of the food. The improve-
ment in the general nutrition
of the body, thus brought
about, is observed in by the
stomach itself which is the
better able to perform its

into the stomach. Here
Alcohol is an aid by its
power to arouse this feeling
known as appetite.
But after the food is gotten
into the stomach the weak
digestive powers must be
assisted, and again is
Alcohol of eminent service.
By its action upon the
mucous membrane of the
stomach more blood is
brought to the organ

function when next called on.
This effect of Alcohol, is gene
rally admitted, and suffices
to recommend its use, in cases
requiring improved nutrition
without considering points
of difference. Whilst this
useful as an aid to the digestion
of all articles of food, it is par
ticularly valuable when
given with fatty matters
Cod Liver oil especially.
This substance, now the

sheet anchor, in the treatment of Tuberculosis, is often rejected entirely, unless given in Alcohol.

Another benefit derived from the right use of this agent, and which is hardly secondary to that just noticed, is the ability it gives the patient to take out door exercise without excessive fatigue. This it does, by the invigoration of the muscular system and by increasing the arterial

heat. It is a mistake to
suppose, as is often done, that
this exaltation is always fol-
lowed by a corresponding
depressing reaction. In
such result will follow, un-
less the effect or rather action
of the agent, be carried beyond
the stimulant point, to that
of narcotism. This not al-
ways easy to draw clearly
the line of demarkation between
these two antagonist powers.

but it may be so closely approximated, as not err far on either side. These two effects of alcohol, viz improvement of digestion and invigouration of muscles, offer a reasonable mode of explaining the benefit that experience has found to be derived from its use in Phthisis, and to recommend its continuance. I shall briefly notice some cases reported by Dr Flint in which alcohol seemed to work as specific

influence over the disease.
In sixty two cases of acute
tuberculosis reported by
this author, fourteen had
been treated exclusively
by alcohol irrespective of
hygienic measures. In one of
these cases, that of a young lady,
a pint of whiskey was taken
daily for two years, with
the result of a complete cure
apparently. A fact worthy
of note, is reported in this

case. that it was only after a great improvement in the health of the patient, that any excitement from the whiskey manifested itself. The happy results, obtained by Dr Flint, in the cases I took noticed, are certainly strong arguments in support of the idea, that Alcohol does exhibit a specific curative influence over Phthisis; but without a much greater mass of evidence

than is yet afforded it would be wrong to trust solely to its use.

The form of Alcoholic liquor, to be used in each case must be determined to a great extent by the taste of the patient. The active remedial agent is Alcohol which exists in all fermented and ardent spirits, but in different proportion of course.

The quantity to be sown is a matter of very great importance, but about which there can be no precise rule.

The different degrees of susceptibility to its influence, manifested in various constitutions, and the remarkable tolerance sometimes induced by its prolonged use, render all laws upon this point very vague and general, although there are some indications

that help to guide the physician.

If upon its administration, a sense of comfort and warmth be felt, with a feeling of increased strength, and a desire for exercise, without any undue excitement of the nervous or circulatory systems, it is safe to conclude that both the quantity and kind of liquor used is proper for that case.

If the reverse of this occur, attention should be given to both

quantity and kind, and if then, the difficulty still exists it should be at once discontinued as it is more likely to do harm than good.

In regard to the prophylactic powers of Alcohol there is much difference of opinion. Those who believe that it does have this power, have advanced many theories to explain its modus operandi, but none are entirely satisfactory.

whilst the matter is thus inver-
ted by so much doubt prudence
dictates great caution in the
use of this agent, for that pur-
pose. The great danger of
habits of intemperance being
contracted by the continued
use of it should always be
borne in mind. It should
never be taken as an aid to con-
viviality nor by those in whom
there is any reason to suspect
that unfortunate craving.

which is so difficult to control.
The fermented liquors should be used when adequate to meet the requirements of the case as less likely to do harm in this way. But in spite of all precautions the physician not infrequently sees those die of intemperance, who began the use of Alcohol, as a prophylactic against Phthisis Pulmonalis.